

BENCH MARK STUDIES OF SOCIO-ECONOMIC  
CONDITIONS OF THE DROUGHT PRONE  
AREAS OF UTTAR PRADESH  
AND  
RAJASTHAN

( Sponsored by the Central Water Commission, New Delhi )

DISTRICT PROFILE : ALLAHABAD

*R. T. TEWARI  
B. K. BAJPAI*

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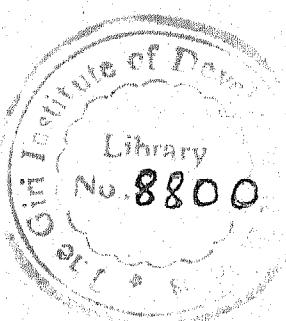
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## PREFACE

This profile of Allahabad district has been prepared as a part of the research project, 'Bench Mark Studies of Socio-Economic Conditions of the Drought Prone Areas of Uttar Pradesh and Rajasthan', sponsored by the Central Water Commission, New Delhi. The profile endeavours to portray the spatial distribution of existing resource potentials of the district and the degree of their exploitation with a view to identifying the major constraints and exploring the possibilities of further development. Apart from accommodating in analysis the major sectors of the economy, the profile summingly highlights the inter-tehsil variations in levels of development.

The profile has been prepared with the overall guidance of the project directors particularly Prof. T.S. Papola and Prof. G.P. Mishra. The team of colleagues associated with the painstaking task of data collection consisted of Shri Fahim Uddin, Shri D.K. Bajpai, Shri G.S. Mehta, Shri S.D. Rai, Shri Yaminul Hasan, Shri P.S. Garia, Shri C.S. Adhikari, Shri Dinesh Singh, Shri P.K. Tripathi and Shri K.S. Bisht. We acknowledge our sincere thanks to the Directors of Economics and Statistics Division and Area Planning Division of the State Planning Institute, Lucknow for their cooperation in providing us the requisite data/information. We are also thankful to Shri S. Mukherjee, Shri R.S. Bisht, Km. Sobha Rani and Shri V.K. Arjunan Achary for nice handling of the manuscript.

R.T. TEWARI

December 1983

B.K. BAJPAI

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## CHAPTER - I

### GEOPHYSICAL CONDITIONS

#### 1.1 Location

In early vedic times, the district of Allahabad was known as Ilvasa, which was derived from the name 'Pururavara Aila', the progenitor of the lunar race whose capital was Pratishthan known today as Jhusi situated across the ganges in the east at Allahabad. During the Mughal period, Akbar visited Prayag in 1575 and founded a new city known as Ilahabad. Gradually people started calling it as Allahabad. The district lies between the parallels of  $24^{\circ}47'$  and  $25^{\circ}47'$  North latitudes and  $81^{\circ}9'$  and  $82^{\circ}21'$  East longitudes. It extends to latitudes 117 km. East-West wards and 10 km. North-South. The districts of Pratapgarh and Jaunpur lie to its North and those of Varanasi and Mirzapur to its East and South-East respectively. The Southern border of the district is attached with the State of Madhya Pradesh. Western and South-Western borders are covered by the districts of Fatehpur and Banda. Size-wise the district stands ninth in the state having total geographical area of about 7255 sq. Km. There are 8 tahsils and 28 Development Blocks in the district. According to 1981 Census, the population of the district is 37.8 lakh. The Agricultural Commission (1971) had identified it as a drought affected district. Within the district, the Yamunapar region comprising 9 Blocks out of 28 in the district have been declared as Drought Prone following the criteria of occurrence of drought, coverage of irrigation and the rainfall. The Blocks covered under the Drought Prone area are Chakka, Karchhana, Kaundhiyara, Jasra, Shankargarh, Meja, Manda, Koraon and Urwa.

### 1.2 Physical Division

Physiographically the entire district is divided into three parts:

#### (i) Trans Ganga Tract:

This part has three northern tehsils of Soraon, Phoolpur and Handia; its extremities along the south are covered by river Ganga. There are broad strips of Khadar (flood plain) in parganas, Nawabganj and Jhusi but the same happen to be narrow and insignificant at places where the river flows close to the high bank. The high banks of Ganga, which find incursion from the ravines and drainage channels, are covered with inferior sandy soil containing kankar (nodular lime stone). North of the high bank lies a belt of light loam generally varying in width, which is broadest in parganas Nawabganj and Jhusi. North of this belt, which is extending to the district boundary, is a broad depression of clay with stretches of usar here and there. The northern limit of which, in tehsil Handia is formed by a high ridge which extends to district Varanasi. Here the water table is high, the excess water is collecting in numerous lakes which form the most noticeable feature of the area, specially in the northern part. The surplus water of this depression escapes north-wards into the tributaries of the Sai, east-wards into the Varuna and south ward into the Mansaita, Baeragia and other minor affluents of the Ganga. The general slope of the tract is towards the east or south-east, the highest altitude being 93.57 metre above the sea level at

Jhusi. The land then unperceptibly drops to 89.30 metre at the Allahabad-Varanasi border near the Grand Trunk Road.

(iii) Doab :

This tract lies between Ganga on the north and Yamuna on the south comprising the tehsils of Chayal, Manjhanpur and Sirathu. Between Ganga and its high ridge there is a strip of alluvial land very narrow in places but elsewhere widening out into broad stretches of sand and salt. A considerable area of this low alluvial plain, which is not generally affected by floods, produces good rabi crop, but elsewhere - as in the neighbourhood of Kara and Shahjadpur - it produces little more than Tamarisk and Thatching grass. The high ridge, which makes the flood bank of Ganga, is covered with gritty soil full of Kankar and is broken by innumerable ravines, some of which extend several Km. in land as the level drops inwards from the high ridge. The soil becomes light loam which changes into stiff clay in the Central depression formed by the valley of the Sarurkhaderi along which there is an undulating belt of poor soil specially in its lower reaches near its confluence with the river Yamuna where the ground is broken by a network of ravines. To the south of Central depression, as the level rises towards the high bank of the river Yamuna, the soil changes into light loam. Along the high bank of the Yamuna the ground is again broken by ravines the soil being full of Kankar. In Doab the slope is from west to east and where the Grand Trunk Road enters the district, the height above sea level is 104.5 m. which gradually drops to 96.0 m. at Allahabad.

(iii) Trans-Yamuna Tract:

This tract lies to the south of Yamuna and forms a part of the Bundelkhand region and comprises the tahsils of Karchhana and Meja, the Tons forming the boundary between the tehsils. To the north of tehsil Karchhana lies a ridge formed by the high banks of the Yamuna and Ganga, which ranges from about a Kilometre and a half to five Kilometres in width. To the north of this ridge there is a narrow strip of Kuchhar (low land) which is more prominent near the confluence of the Ganga and Tons and in the north eastern part of the tehsil Meja. To the south of the ridge lies the upland (strip of old alluvium) which comprises the central part of tehsil Karchhana and the tracks of Chaurasi and Manda Hitar of tehsil Meja. To the south of upland the ranges of the Vindhyan series lie in three sections, the Vindhyaachal, the plateau and the panna range.

1.3 Climate

Allahabad district comes in the category of semi-arid region. The climate of the district is prone to long and hot summer, it is followed by fairly pleasant monsoon and ending the climatic cycle with the substantial cold. In general winter continues from mid November to February, after this summer season persists up to the middle of June. The south-west monsoon then brings rainy season in the district which lasts for more than three months. The temperature of the district during summer season, normally varies between  $16.3^{\circ}\text{C}$  to  $41.8^{\circ}\text{C}$  and in the winter season from  $8.6^{\circ}\text{C}$

to  $26.3^{\circ}\text{C}$ . The relative humidity during the monsoon remains to the extent of 85 per cent, but during summer and winter months it varies between 18 to 44 per cent and 35 to 80 per cent respectively. Evaporation and evapotranspiration losses in the district vary between 57.0 mm. and 233.4 mm. from winter to summer months.

#### 1.4 Rainfall

Allahabad district in Uttar Pradesh receives 88.99 per cent of the annual rainfall from the south-west monsoon, which generally sets in the third week of June and continues upto first week of October. August is the雨iest month. The highest annual rainfall of 1683.8 mm. occurred in the year 1948 as against 946.00 mm. normal rainfall of the district. The contribution of rainfall from post monsoon season is very low in the district. Only 4.74 per cent of annual rainfall occurs during October and November. The balance of 6.27 per cent occurs during the months of December and January to May. The details of the rainfall data of district are given in table no. 1.1.

While analysing the co-efficient of variation (C.V.) of rainfall in the district we find the decreasing trend with the increase of rainfall in different months. The C.V. values range from a minimum 44.0 per cent in August to a maximum of 261.0 per cent in November, although the C.V. for monsoon season (total of June to September) and annual series are 26.0 per cent and 24.0 per cent respectively.

Table-1.1 - Normal Rainfall

( Period 1901--1980)

| Months               | Normal Rainfall<br>in mm. | Standard<br>Deviation<br>(value of<br>Normal<br>rainfall) | Co-efficient of<br>variation (value<br>of normal rain-<br>fall) |
|----------------------|---------------------------|---|---|
| 1                    | 2                         | 3   | 4   |
| <u>S.W.monsoon</u>   |                           |   |   |
| <u>season values</u> | 841.9                     | 218.6   | 26.0  |
| January              | 16.6                      | 21.1  | 127.0   |
| February             | 16.9                      | 22.5  | 133.0   |
| March                | 8.1                       | 14.2  | 175.0   |
| April                | 4.7                       | 9.9   | 211.0   |
| May                  | 7.2                       | 14.2  | 197.0   |
| June                 | 81.2                      | 89.0  | 110.0   |
| July                 | 291.5                     | 144.2   | 49.0  |
| August               | 295.1                     | 129.9   | 44.0  |
| September            | 174.1                     | 116.7   | 67.0  |
| October              | 36.6                      | 56.8  | 155.0   |
| November             | 8.2                       | 21.4  | 261.0   |
| December             | 5.8                       | 10.7  | 184.0   |
| Annual               | 946.0                     | 227.1   | 24.0  |

It is clear from the above table that except in July and August, when the C.V. values are 49.0 and 44.0 per cent respectively, the C.V. values are more than 50 per cent for all the months indicating thereby the erratic nature of rainfall. The seasonal annual C.V. value are 26.0 and 24.0 per cent, which are less than 30 per cent, the yard-stick fixed for erratic nature of rainfall. An examination of the annual rainfall of the district reveals that although the annual C.V. (normal) value is 24.0 per cent, the annual rainfall has been

varying from a maximum of 1633.8 mm. in 1948 to minimum of 428.1 mm. in 1965, the normal being 946.0 mm.

### 1.5 Soils

The District land may be subdivided into two main categories: (1) Low Land (or Kachhar) and (2) Upland (Uparhar). The former is identified with the riverine low-lands of the Yamuna and the Tons basin and resembles the Ganga Kachhar, though being less fertile. The soils of the district consist of clay, loam, sandy loam and black cotton. The clay is found in the depressions. It is fit for the cultivation of rice. Loam known as Dumat is a mixture of sand and clay. It is usually a rich and rather dark soil. North of the high bank of river Ganga lies a belt of light loam. Wherever in the district the level of Ganga drops inwards from the high ridge, the soil becomes light loam. To the south of central depression of the district formed by the valley of Sasur Khaderi, as the level rises towards the high bank of the Yamuna, the soil changes into light loam. The sandy loam locally known as Sigon is of a less fertile variety. Black cotton soil locally known as 'Mar' is a dark, friable earth, which is capable of absorbing immense amount of moisture out of drying splits into great fissures making irrigation almost impossible. It varies in quality and in the uplands of tehsil Meja is often of very poor quality. The stony soil of the hills called "Bhota" is of little value and is an outcome of the range of the Vindhyan series which lies in three sections, the Vaidhyachal the plateau and the panna range.

#### 1.6 Landuse

The total geographical area of the district in 1980-81 was 7.37 lakh ha. The forest covered 2.73 per cent of it and the barren land accounted for 4.95 per cent. The percentage of net area sown to total reporting area was as high as 63.23 and the area sown more than once constituted 22.57 per cent only. The proportion of culturable waste and other fallow land to total reporting area was 8.11 per cent and the current fallow accounted for 7.56 per cent. Hence there seems to be still a wide scope for bringing larger area under cultivation. The area under permanent pasture was negligible, i.e., 18 per cent of the total geographical area.

#### 1.7 Forest

The total area of the forest in the district during 1980-81 was 20142 hectares, i.e., 2.73 per cent of the total reporting area. More than 15000 hectares of the forest area is lying in Meja tehsil. The chief varieties of trees found in these forests are Dhak, Kakar, Kahwa, Jharberi, Karju, Mahua, Semal, Salai, Khair, Harra, Chiranje, Bahera, Tendu and Babool. These forests do not produce any useful or commercial timber. The Tendu leaves are, however, exported to other districts for manufacture of B ri. These forests were brought under scientific management after 1952 and thereafter plantations have been raised to rehabilitate them. The forest department has already started plantation work in these areas and it is expected that area under forest would gradually increase.

### 1.8 Rivers and Drainage System

The rivers of the district belong to the main system of the Ganga and comprise several sub-systems of which the most important are the Yamuna and the Tons. The Ganga enters the district from the north-west in tehsil Sirathu and after its confluence with the Yamuna at Allahabad flows out east-ward into Mirzapur and Varanasi. The Yamuna enters the district from west near Mawai in tehsil Majhanpur and passing through Karchhana and Chayal tehsils joins the Ganga. The Tons coming from the hills of Madhya Pradesh enters the district in tehsil Meja and flows forming the boundary between Meja and Karchhana tehsil upto Sirsa, where it also joins the Ganga. The approximate length of the rivers and their catchment area passing through Allahabad are depicted below:-

Table 1.2 - Length and Catchment Area of Main Rivers

| Name of the river | Approximate Length in Km. | Catchment area in sq.km. | Percentage of catchment area in the District |
|-------------------|---------------------------|--------------------------|--|
| 1                 | 2                         | 3                        | 4  |
| Ganga             | 125                       | 4000                     | 55.13  |
| Yamuna            | 101                       | 1255                     | 17.30  |
| Tons              | 72                        | 920                      | 12.68  |
| Belan             | 50                        | 1080                     | 14.89  |
| Total             |                           | 7255                     | 100.00                                       |

SOURCE: Report on Identification of Drought Prone areas in District Allahabad, U.P., Oct. 1982 Govt. of India, Ministry of Irrigation, C.W.C., New Delhi.

The total catchment area of the main rivers of district Allahabad is 7255 sq.km. The highest catchment area is of the river Ganga (4000 sq.Km.) as compared to those of the rivers Yamuna, Belan and Tons (Their catchment areas being 1255, 1080 and 920 sq.km. in respective order). The maximum length within the district is also of the river Ganga, i.e. , 125 Km. The other rivers flowing through district Viz. Yamuna, Tons and Belan are covering the area of 101, 72, and 50 Km. respectively.

These rivers are very useful for the district from the view point of solving the irrigation requirements. But due to the seasonal character of river flows, a major portion of their run off available in the district cannot be utilised. The concentration of flows in the four or five monsoon months makes it imperative to construct storage works to hold the flood water for subsequent uses. However suitable sites for economic construction of storage dams are not available in the area. Further the dry flows of the main rivers Ganga and Yamuna cannot be utilised as the available quantity of water has to be allowed to flow down to meet the commitments down stream.

At the places where water table of river Ganga is very high numerous lakes are formed from the excess surface water coming into the low area. The surplus water of this depression escapes north-wards into the tributaries of Sai, east-wards into the Varuna and south-wards into the Mansaita, the Bairagia and other minor affluents of the Ganga.

### 1.9 Surface and Ground Water

Availability of water in the district can be categorised under two heads first, availability of surface water and second, that of ground water. In the district, generally, the surface water is obtained through canals, Tanks, ponds, lakes, lift pumps and bandhies, etc., whereas the ground water through tubewells and other kinds of wells. The water level of the district is very low. However, some areas of Trans Yamuna Tract, which have been declared Drought Prone, are full of rocks where the use of blast wells is the only way out to get ground water for irrigation and other purposes.

Approximately 60 per cent of the total irrigation in the district is fulfilled by the ground water resources and the rest 40 per cent is met through exploitation of surface water.

#### (i) Surface Water:

According to the assessments made under Khosla Formula the normal run-off of the surface water in the district is 2885.29 MCM, of which 50 per cent, i.e., 1442.64 MCM, is utilisable flow. The substantial portion of the run-off available in the district cannot be utilised because of the river flows being of seasonal character and other limitations imposed by the physiographic features of the district. The concentration of flows during four or five monsoon months makes it imperative to construct storage works to hold the flood waters for subsequent uses. However, suitable sites for economic construction of storage dams are not available in the area. Further the dry flows of the rivers Ganga and Yamuna

cannot be utilised as the available quantity of water has to be allowed to flow down for meeting the commitments downstream. According to following table, in the year 1980-81, out of the total net irrigated area of 199649 ha. in the district, about 41.2 per cent was irrigated by exploitation of surface water resources. The contribution of canal to surface water irrigation was as high as 92.15 per cent and the rest 7.85 per cent was through Ponds, lakes, etc.

Table 1.3 - Irrigation Through Surface Water Resources.

(1980-81)

| Source<br>Area | Canal<br>1 | Pond lake<br>and Tanks<br>etc.<br>2 | Other<br>Sources<br>3 | Net irriga-<br>ted area<br>through<br>surface water<br>4 | Total Net<br>irrigated<br>area of the<br>District<br>5 | 6 |
|----------------|------------|-------------------------------------|-----------------------|--|--|---|
| Hectares       | 75783      | 4871                                | 1583                  | 82237  | 199649   |   |
| Percentage     | 37.96      | 2.44                                | 0.79                  | 41.19  | 100.00   |   |

SOURCE: Statistical Bulletin -- Allahabad, Office of the District Economics and Statistical Officer, Allahabad, U.P.

(ii) Ground Water:

The gross recharge of the ground water in the district as assessed by the State Ground Water Investigation Organisation was 2414.6 MCM during the year 1980-81. Net recoverable recharge has been considered as 70 per cent of the gross recharge which comes to 1690.25 MCM. According to this organisation, the total usable ground water potential might

not exceed 80 per cent of the net available ground water recharge and therefore it suggested a figure of 1352.2 MCM for long term potential to be developed in the district Allahabad. On the other hand, the total ground water draft during 1980-81 was 665.42 MCM. through different sources. The net draft of this works out to 469.01 MCM. According to the following table, the net irrigated area through ground water resources was 117412 ha. which constituted 58.81 per cent of the net irrigated area of the district.

Table 1.4 - Irrigation Through Ground Water Resources

| Source<br>Area<br>Area | Private and<br>State Tube-<br>Wells | Wells fitted<br>with & with-<br>out persian<br>wheel | Net irrigated<br>area through<br>ground water<br>resources | Total Net<br>irrigated<br>area of the<br>district |
|------------------------|-------------------------------------|--|--|---|
| 1                      | 2                                   | 3  | 4  | 5   |
| Hectares               | 104117                              | 13295  | 117412   | 199649  |
| Percentage             | 52.15                               | 6.66   | 58.81  | 100.00  |

SOURCE: Statistical Bulletin--Allahabad, Office of the District Economics and Statistics Officer, Allahabad, U.P.

Thus, the utilisable balance still left with the district was 863.20 MCM, which accounts for 65.32 per cent of the total safe yield.

#### 1.10 Minerals

The mineral products that are commonly found in the district are glass sand, building stone, Kankar, Brick earth and reh. Some of the best glass sand deposits are found in the neighbourhood of Shankargarh, Lohgara falling in Karchhana

tehsil. The requirements of most of the glass factories in northern India are met through these deposits the whitish sand being derived from the friable sand stone in the area. The Kaimur sand stone is an excellent building stone. It lies in beds varying between 150 mm. and 2.5 mm. in thickness and is extracted either by blasting or by splitting, the chief quarries being at Sheorajpur (Karchhana tehsil). Kankar is available throughout the Doab and the trans Ganga tract but the better beds are found at Lawain and Banswar in tehsil Karchhana. Brick and pottery earth are available in the alluvial tract of the district and are locally used for the manufacture of bricks and earthen ware, the city being well known for its bricks and tiles. Reh is found as a white encrustation in the usar land, especially in the trans Ganga Tract. Soda ash, which is extracted from it, is used in the manufacture of soap and glass, for the treatment of hardwater, in the dying industry and when rich in sodium sulphate, for the extraction of sulphur. In its slightly purified form, it is often used by Dhobies as a substitute for soap.

#### 1.11 Livestock

Allahabad is one of the highly potential districts of the State in the matter of livestock wealth. According to the livestock census of 1978, the total livestock population of the district is 18.29 lakh, of which milch cattle, shebuffaloes, goats/sheep and pigs constitute 49.68%, 18.64%, 23.95% and 6.08 per cent respectively. Besides, the district

also has 1.83 lakh poultry birds. The density of livestock population and poultry birds per square Km. of area in the district comes to 252 and 25 respectively. Over the base year 1972, we notice a significant reduction in density of livestock population of the district during 1978, the possible reasons being increased consumption of livestock and higher mortality owing to outbreak of diseases and the reduced rearing facilities.

## CHAPTER - II

### HUMAN RESOURCES

#### 2.1 Population

The total population of Allahabad district, which according to 1961 Census was 24.38 lakh, increased to 29.37 lakh in 1971 and 37.80 lakh during the year 1981. Thus, the decennial growth rates of population of the district for the decades 1961--71 and 1971--81 work out to 20.46 and 28.71 per cent respectively. Whereas the corresponding growth rates in the eastern region during these decades were 17.29 and 25.33 per cent respectively. Moreover, during the period 1961--71 the decennial growth rate of population in the State was 19.79 per cent which increased to 25.52 per cent during 1971--81. Thus, the decennial growth rate of population in the district during the decade 1961--71 was higher than that of the region and the state, as would be evident from the table no. 2.1.

However, during the decade 1971--81 we observe that the population growth in the district was higher (28.71%) than the State (25.52%) and the region (25.33%). Further the percentage shares of the district population in the total population of the region and the State showed a continuous increase during the previous three Censuses (1961, 1971 and 1981). A relatively larger expansion of economic activities particularly in industrial sector appears to be one of the plausible reasons for the higher growth of population in the district during the previous decade. In support of the former, we

Table 2.1 - Population Growth

| Population Category                      | 1961               |                     | 1971                |                    | 1981                |                     |
|--|--------------------|---------------------|---------------------|--------------------|---------------------|---------------------|
|  | Allahabad          | Eastern Region      | U.P.                | Allahabad          | Eastern Region      | U.P.                |
| 1. <u>Total Population</u>               | 1                  | 2                   | 3                   | 4                  | 5                   | 6                   |
| (i) Decennial Growth in total population | —                  | —                   | —                   | 20.46              | 17.29               | 19.79               |
| (ii) Male                                | 1263981<br>(51.84) | 14280597<br>(50.49) | 38634201<br>(52.39) | 1389996<br>(47.32) | 16991501<br>(51.22) | 47016421<br>(53.22) |
| (iii) Female                             | 1174395<br>(48.16) | 14001391<br>(49.51) | 35112200<br>(47.61) | 1547282<br>(52.68) | 16179365<br>(48.78) | 41324723<br>(46.78) |
| 2. <u>Rural Area</u>                     |                    |                     |                     |                    |                     |                     |
| (i) Rural Population                     | 1994412<br>(81.79) | 26185726<br>(92.59) | 64266506<br>(87.15) | 2393882<br>(81.50) | 30445830<br>(91.78) | 75952548<br>(85.98) |
| (ii) Decennial Growth                    | —                  | —                   | —                   | 20.03              | 16.27               | 18.18               |
| 3. <u>Urban Area</u>                     |                    |                     |                     |                    |                     |                     |
| (i) Urban Population                     | 443964<br>(18.21)  | 2096262<br>(7.41)   | 9479895<br>(12.85)  | 543396<br>(18.50)  | 2725036<br>(8.22)   | 12388596<br>(14.02) |
| (ii) Decennial Growth                    | —                  | —                   | —                   | 22.40              | 30.00               | 30.68               |
|  |                    |                     |                     |                    |                     |                     |
|  |                    |                     |                     |                    |                     |                     |

NOTE: Figures given in parentheses denote percentages to totals.

SOURCE: District Census hand book, 1971 and provisional population totals, 1981 Census, Paper-1 of 1981 supplement Director of Census operations, U.P. Lucknow.

-: 18 :-

find that the annual growth rates of output separately for registered and unregistered manufacturing industries in the district during the period 1971-77 were 12.5 and 11.6 per cent respectively, whereas the corresponding figures at the regional level stood at 0.9 and 2.7 per cent only.

The male-female ratio of population in the district, which was 51.84 in 1961, turned out to be 47.32 in 1971, but further reversed to 52.94 during 1981. The percentage of male population to its total in the region showed a constant increase from 50.49 in 1961 to 51.22 and 51.44 per cent during the years 1971 and 1981 respectively. Besides, male-female ratio of population in the State did not show any significant change during these static years. 8800

The percentage of rural population to the total population in the district in 1961 was 81.79 and the remaining 18.21 per cent was the urban population. The decennial growth rates of rural population in the district during the periods 1961-71 and 1971-81 were 20.03 and 25.78 per cent respectively, whereas the corresponding growth rates of urban population recorded to be 22.40 and 41.65 per cent, showing much higher growth of urban population. The latter is found to be much higher in the region and the State as compared to district during the period 1961-71. But during 1971-81, highest urban population growth was observed in the State followed by district and region.

## 2.2 Density

The density of population in the district in 1961 was 327 persons per Sq.Km. of area as against 330 in the eastern region and 250 in whole of the state. These densities at the district, region and the state levels were 405, 387 and 300 persons respectively in 1971 and 521, 484 and 377 persons during the year 1981, thus population density of the district, which was lower than the region in 1961, occupied its position at first during the years 1971 and 1981.

## 2.3 Literacy

The literacy rate stood at 28.61 per cent in the district in 1981, as against 24.61 per cent in the region and 27.40 per cent in the state. Literacy in the district is found to be 21.85 per cent in rural areas and 55.05 per cent in urban areas. According to the following table, the rural and urban literacy rates in the eastern region are found to be 21.80 and 48.09, whereas the corresponding percentages at the state level work out to 23.34 and 45.91 per cent respectively.

Table 2.2 - Literacy Percentage

( 1981 )

| S1.<br>No.                   | Particulars  | Rural             | Urban             | Total              |
|------------------------------|--------------|-------------------|-------------------|--------------------|
| 0                            | 1            | 2                 | 3                 | 4                  |
| <b>1. Allahabad District</b> |              |                   |                   |                    |
|                              | (i) Total    | 657801<br>(21.85) | 423772<br>(55.05) | 1081573<br>(28.61) |
|                              | (ii) Male    | 566928<br>(35.89) | 272715<br>(64.62) | 839643<br>(41.95)  |
|                              | (iii) Female | 90873<br>(6.35)   | 151057<br>(43.45) | 241930<br>(13.60)  |

Contd. ..../-

| Sl.<br>No.               | Particulars  | Rural               | Urban              | Total               |
|--------------------------|--------------|---------------------|--------------------|---------------------|
| 0                        | 1            | 2                   | 3                  | 4                   |
| <b>2. Eastern Region</b> |              |                     |                    |                     |
|                          | (i) Total    | 8097811<br>(21.80)  | 2132369<br>(48.09) | 10230174<br>(24.61) |
|                          | (ii) Male    | 6573355<br>(34.61)  | 1402825<br>(58.59) | 7976180<br>(37.50)  |
|                          | (iii) Female | 1524456<br>(8.40)   | 729538<br>(35.77)  | 2253994<br>(11.17)  |
| <b>3. Uttar Pradesh</b>  |              |                     |                    |                     |
|                          | (i) Total    | 21214713<br>(23.34) | 9169002<br>(45.91) | 30383715<br>(27.40) |
|                          | (ii) Male    | 16982718<br>(35.40) | 5889439<br>(54.44) | 22872157<br>(38.90) |
|                          | (iii) Female | 4231995<br>(9.86)   | 3279563<br>(35.82) | 7511558<br>(14.42)  |

NOTE: Figures given in parentheses denote percentages to totals.

SOURCE: Provisional Population totals, 1981 Census.  
Paper-I of 1981 Supplement Director of Census  
Operations, U.P., Lucknow.

The female literacy rate in the district is recorded to be 13.60 per cent as compared to the males (41.95 per cent). The female literacy in rural areas of the district is found to be extremely low, i.e., 6.35 per cent. However, the literate females in the urban areas of the district are 43.45 per cent. In this context, it is worthwhile to mention that both the female and male literacy percentages are much higher in the district than that of the region and the state.

#### 2.4 Sex-ratio

The sex ratio of the district, which was 921 in 1961 and 898 in 1971, stood at 889 during 1981 as against 886 in the state. During the previous three Censuses, the sex ratio in the rural areas of the district was higher as compared to the urban areas. It has shown a continuous decline in rural areas since 1961. During 1961 the sex ratio was 965 which reduced to 925 and 906 in rural areas during 1971 and 1981 respectively. Contrary to this, the sex ratio in urban areas of the district has shown a continuous increase during these static years. As shown below, the sex ratio in urban areas which was 783 in 1961 increased to 790 in 1971 and 824 during 1981.

Table 2.3 - Sex Ratio

| Sl.<br>No. | Year/Classification | 1981 | 1971 | 1961 |
|------------|---------------------|------|------|------|
| 0          | 1                   | 2    | 3    | 4    |
| 1.         | District            | 889  | 898  | 921  |
| 2.         | Rural               | 906  | 925  | 965  |
| 3.         | Urban               | 824  | 790  | 783  |

SOURCE: District Census Hand Book; Allahabad, 1961, 1971 and provisional population totals Paper-I of 1981 Supplement Director of Census Operations, U.P. Lucknow.

Analysis of the above data suggests that (i) Sex ratio in rural areas and whole of the district has shown a continuous decline since 1961, whereas the corresponding ratio in urban areas has shown a continuous increase during the three preceding Censuses. A higher sex ratio in urban areas may be attributed to out-migration of male population from rural to urban areas in search of job. Secondly, it may also be on account of the increase in matrimonial settlements of the females of rural rich households with males in urban areas, besides marriages of urban females within urban areas.

#### 2.5 Urban Settlement

The urban population of the district which was 4.44 lakh in 1961, increased to 5.42 lakh in 1971 and 7.62 lakh during the year 1981. Thus, the growth rate of urban population, which was 22.40 per cent during the period 1961--71 increased to 40.59 per cent during the period 1971--81. Compared to the urban population, growth of rural population has been slow in the district. During the decade 1961--71 the growth of rural population was 20.03 per cent which increased to 32.45 per cent during 1971--81. Alongwith these trends, there has been a continuous upward shift in the percentage of urban population during the previous two decades, i.e., 1961--71 and 1981. The percentage of urban population, which was 18.21 in 1961, increased to 18.50 and 20.36 during the years 1971 and 1981 respectively. The two main factors seem to be responsible for rapid growth of urban population in the district. First, as stated earlier, there has been

a continuous out-migration of rural population to urban areas in search of employment. Second, some more rural areas of the district have been converted into town areas, resulting in faster growth of urban settlement.

The total number of towns in the district in 1971 was 5 which increased to 15 during the year 1981; the population of the city headquarters, which was 5.13 lakh in 1971 increased to 6.42 lakhs during the year 1981. Besides, the number of towns increased from 4 in 1971 to 14 during 1981. With the result, the population of these towns registered an increase of 24.21 per cent during the decade 1971--81. Details of the towns alongwith their population in the district are given in the following table:-

Table 2.4 - Details of Class Towns and Their Population

| Sl.<br>No. | Town<br>Class | 1971              |                    | 1981              |                    |
|------------|---------------|-------------------|--------------------|-------------------|--------------------|
|            |               | No. of Towns<br>1 | Population<br>2    | No. of Towns<br>4 | Population<br>5    |
| 0          |               | 2                 | 3                  | 4                 | 5                  |
| 1.         | I             | 1                 | 513036<br>(94.64)  | 1                 | 642420<br>(84.25)  |
| 2.         | II            |                   |                    |                   |                    |
| 3.         | III           |                   |                    |                   |                    |
| 4.         | IV            |                   |                    | 3                 | 35014<br>(4.59)    |
| 5.         | V             | 4                 | 29067<br>(5.36)    | 9                 | 75861<br>(9.95)    |
| 6.         | VI            |                   |                    | 2                 | 9192<br>(1.21)     |
|            | Total         | 5                 | 542103<br>(100.00) | 15                | 762487<br>(100.00) |

NOTE: Figures given in parentheses denote percentages to totals.

SOURCE: District Census Hand Book 1971, and Provisional Population Totals, Paper-I of 1981 Supplement.  
Director of Census Operations, U.P., Lucknow.

Out of the four town areas, i.e., Phoolpur, Mauaima, Bharatganj and Sirsa of the district falling in the category of fifth class towns in 1971, Phoolpur and Mauaima have joined the category of fourth class town during 1980-81. Besides these, Nindura has also been declared as town area, bringing its total to three in this category during 1981. In the category of fifth class towns excepting Sirsa and Manjhampur which already existed in this category seven more town areas have come up, with the result, the total number of towns in this category increased to nine during the year 1981.

Up to the year 1971, there was no town area in the category of sixth class towns in Allahabad but Niyotani and Jhusi were included in this category during 1981, with an additional urban population of 9192. The proportion of city headquarters population went down over the period 1971--81. A higher growth of overall urban population was because of these rural areas which were part and partial of rural areas during the previous decade, and secondly because of rapid growth of population in already declared town areas. In the category of fifth class towns, the percentage of urban population was 5.36 during 1971 which during 1981 accounted for 9.95 per cent, whereas the percentage population of city headquarters (first category) went down from 94.64 to 84.25 during the period 1971--81. The population in fourth and sixth class towns, which was 'nil' in 1971, increased to 5.80 per cent of the total urban population during 1981.

## 2.6 Scheduled Caste and Scheduled Tribe Population

According to 1981 Census, the population of the scheduled caste in the district is 9.31 lakh and only 256 persons are scheduled tribes. The scheduled caste population accounts for 24.52 per cent and the scheduled tribes constitute only .01 per cent of the total population in the district. The ratio of these backward classes to total population in the district has gone up during the previous decade. The proportion of shceduled caste and scheduled tribes population to total population in the district during 1981 is found to be higher as compared to the state. Moreover, the growth rate of scheduled caste and scheduled tribes population in the district is found to be higher than the growth of general population. Contrary to this, the state experienced lower growth of Scheduled Caste and Scheduled Tribes population than that of general population.

Table 2.5 - Growth of Scheduled Caste and Scheduled Tribes Population in District and State.

| Sl. No. | Population/Category                          | 1971                | 1981                | Percentage Growth |
|---------|--|---------------------|---------------------|-------------------|
|         |  | 1                   | 2                   | 3                 |
| 1.      | Scheduled Caste                              | 726913<br>(24.75)   | 931075<br>(24.52)   | 28.09             |
| 2.      | Scheduled Tribes                             | 587<br>( .02)       | 256<br>( .01)       | -56.39            |
| 3.      | Non-Scheduled Caste and Non-Scheduled Tribes | 2209778<br>(75.73)  | 2865202<br>(75.47)  | 29.68             |
| 4.      | Total Population of the District             | 2937278<br>(100.00) | 3797033<br>(100.00) | 29.27             |

Contd. ..../-

| Sl. No. | Population/Category                          | 1971                 | 1981                  | Percentage Growth |
|---------|--|----------------------|-----------------------|-------------------|
|         |  | 1                    | 2                     | 3                 |
| 5.      | Scheduled Caste                              | 18551640<br>(21.00)  | 23453339<br>(21.15)   | 26.42             |
| 6.      | Scheduled Tribes                             | 176682<br>(.20)      | 232705<br>(.21)       | 31.71             |
| 7.      | Non-Scheduled Caste and Non-Scheduled Tribes | 69612822<br>(78.80)  | 87175969<br>(78.64)   | 25.23             |
|         | Total U.P. Population                        | 88341144<br>(100.00) | 110862013<br>(100.00) | 25.49             |

NOTE: Figures given in parentheses denote percentages to totals.

SOURCE: District Census Handbook, 1971 and Provisional Population totals, Paper-I of the 1981 Supplement. Director of Census Operations, U.P., Lucknow.

There has been a fall in scheduled tribe population of district during the previous decade 1971--81. This is probably because of the out-migration of these people from Trans Yamuna area (Karchhana) to Madhya Pradesh for seeking employment in stone mines.

#### 2.7 Work-Force Participation Ratio

Work Force participation rates vary from one area to other in the state in accordance with the concentration of economic activities and availability of job opportunities. As a general hypothesis goes, larger concentration of economic activities is expected to result in higher work force participation ratio.

In Allahabad, the work force participation ratio, which was 32.30 per cent in 1971 decreased to 29.24 per cent during 1981. A decline of this ratio in the district is at a higher

pace as compared to the state. The work force participation ratio is found to be higher in rural part as compared to urban areas. There was an increase in the workforce participation ratio of the district and the state by 16.50 and 18.18 per cent during the previous decade. The increase in the workforce in the rural areas was 13.70 per cent as against 31.42 per cent in urban areas during this period.

It is also clear from the following table that the percentage share of workforce in total population of the district was slightly higher than the state. Contrary to this, the growth of workforce in the district was slightly lower than the state during the period 1971--81.

Table 2.6 - Work-Force Participation in Rural and Urban Areas.

| District/<br>State | 1971                    |                           |  | 1981           |                           |                                      | % Varia-<br>tions             |       |   |   |
|--------------------|-------------------------|---------------------------|--|----------------|---------------------------|--------------------------------------|-------------------------------|-------|---|---|
|                    | Total<br>Popn.<br>(No.) | Total<br>Workers<br>(No.) | % of total<br>workers to<br>total<br>Popn. | Total<br>Popn. | Total<br>Workers<br>(No.) | % of<br>workers to<br>total<br>Popn. | Popn.<br>to<br>total<br>Popn. | 8     | 8 | 9 |
| 1                  | 2                       | 3                         | 4  | 5              | 6                         | 7                                    |                               |       |   |   |
| Rural              | 2395175                 | 788475                    | 33.34                                      | 3010921        | 907841                    | 30.15                                | 25.71                         | 13.70 |   |   |
| Urban              | 542103                  | 150239                    | 27.71                                      | 769744         | 197442                    | 25.65                                | 41.99                         | 31.42 |   |   |
| Allahabad          | 2937278                 | 948714                    | 32.30                                      | 3780665        | 1105283                   | 29.24                                | 28.71                         | 16.50 |   |   |
| Rural              | 75952548                | 23906118                  | 31.48                                      | 90912651       | 26879270                  | 29.57                                | 19.70                         | 12.44 |   |   |
| Urban              | 12388596                | 3428337                   | 27.67                                      | 19973223       | 5423406                   |                                      |                               |       |   |   |
| U.P.               | 88341144                | 27334455                  | 30.94                                      | 110885874      | 32302676                  |                                      |                               |       |   |   |
|                    |                         |                           |  |                |                           | 29.13                                | 25.52                         | 18.18 |   |   |

SOURCE: District Census Handbook 1971 and Provisional Population totals, Paper-I of 1981 Supplement.  
Director of Census Operations, U.P., Lucknow.

The ratio of male-female workers in the district which was 82:18 in 1971, increased to 84:16 during 1981.

Thus, the female participation in total workforce has gone down during 1981 as compared to 1971.

The analysis of occupational distribution of workers in different categories tells us that a slightly higher than 75 per cent of the total workforce is engaged in agriculture and allied activities in the district. It is also clear that in the category of cultivators the proportion of male workers has shown a marginal decline as against the proportion of female workers which has slightly increased in 1981 as compared to 1971, whereas the trend in case of agricultural labourers is found to be just reverse. Besides, the workforce participation ratio in 'Household Industries' and 'others' categories showed a general increase during this period but the proportion of male participation showed a marginal decline in both the categories, with simultaneous increase in females participation. In sum, although the proportion of females in the total work-force went down in the district during the previous decade. This is primarily because of the significant decline in proportion of female participation to the total agricultural labourers from 37.16 per cent in 1971 to 29.5 per cent during 1981.

Table 2.7 - Sex-wise Distribution of Workers

(Number)

| Sl. No. | District/<br>Category | 1971    |         |          | 1981    |         |          |
|---------|-----------------------|---------|---------|----------|---------|---------|----------|
|         |                       | Male    | Female  | Total    | Male    | Female  | Total    |
| 0       | 1                     | 2       | 3       | 4        | 5       | 6       | 7        |
| 1.      | Cultivators           | 371116  | 51407   | 422523   | 451249  | 66500   | 517749   |
|         |                       | (87.83) | (12.17) | (100.00) | (87.16) | (12.84) | (100.00) |
| 2.      | Agr. Lab.             | 167836  | 101416  | 269252   | 183482  | 76843   | 260325   |
|         |                       | (62.33) | (37.67) | (100.00) | (70.48) | (29.52) | (100.00) |
| 3.      | H.H. Indust.          | 37758   | 7356    | 45114    | 60430   | 12036   | 72466    |
|         |                       | (83.69) | (16.31) | (100.00) | (83.39) | (16.61) | (100.00) |
| 4.      | Others                | 198937  | 12888   | 211825   | 228457  | 26286   | 254743   |
|         |                       | (93.92) | (6.08)  | (100.00) | (89.68) | (10.32) | (100.00) |
|         | Total                 | 775647  | 173067  | 948714   | 923618  | 181665  | 1105283  |
|         |                       | (81.76) | (18.24) | (100.00) | (85.56) | (14.44) | (100.00) |

NOTE: Figures given in parentheses denote percentage to totals.

SOURCE: District Census Handbook, 1971 and Provisional population Totals, Paper-I of 1981 Supplement.  
Director of Census Operations U.P., Lucknow.

As would be evident from the following table, the proportion of workforce in rural areas decreased from 84.16 per cent in 1971 to 82.14 per cent during 1981. Whereas, the corresponding proportion in urban areas showed a simultaneous increase over the period. A similar kind of trend is found in the cases of cultivators, agricultural labourers and household industries. But in case of 'others' category we find an opposing tendency; the proportion of workforce in rural areas.

Table 2.8 - Distribution of Workers in Rural and  
Urban Areas.

(Numbers)

| Sl.<br>No. | District     | 1971              |                   |                    | 1981              |                   |                     |
|------------|--------------|-------------------|-------------------|--------------------|-------------------|-------------------|---------------------|
|            |              | Rural             | Urban             | Total              | Rural             | Urban             | Total               |
| 0          | 1            | 2                 | 3                 | 4                  | 5                 | 6                 | 7                   |
| 1.         | Cultivators  | 419292<br>(99.24) | 3231<br>(.76)     | 422523<br>(44.54)  | 506848<br>(97.89) | 10901<br>(2.11)   | 517749<br>(46.84)   |
| 2.         | Agr. Labour  | 264096<br>(98.09) | 5156<br>(1.91)    | 269252<br>(28.38)  | 248278<br>(95.37) | 12047<br>(4.63)   | 260325<br>(23.55)   |
| 3.         | H.H. Indust. | 35415<br>(78.50)  | 9699<br>(21.50)   | 45114<br>(4.76)    | 50569<br>(69.78)  | 21897<br>(30.22)  | 72466<br>(6.56)     |
| 4.         | Others       | 79672<br>(37.61)  | 132153<br>(62.39) | 211825<br>(22.33)  | 102146<br>(40.10) | 152597<br>(59.90) | 254743<br>(23.05)   |
|            | Total        | 798475<br>(84.16) | 150239<br>(15.84) | 948714<br>(100.00) | 907841<br>(82.14) | 197442<br>(17.86) | 1105283<br>(100.00) |

NOTE : Figures given in parentheses denote percentages to totals.

SOURCE: District Census Handbook, 1971 and Provisional Population Totals, Paper-I of 1981 Supplement.  
Director of Census Operations, U.P., Lucknow.

Looking at the overall sectoral distribution of work-force we find that there has been a sharp decrease in the percentage of agriculture labourers in 1981 as compared to 1971. At the same time, there has been an increase in the strength of cultivators and those engaged in household industries and 'other workers' category.

### CHAPTER - III

#### INCIDENCE OF DROUGHT ON AGRICULTURE

As described in the previous chapter, the district abounds with both surface as well as ground water resources. But larger proportion of area irrigated in the district is mainly through exploitation of ground water resources. Out of the total net irrigated area of the district about 60 per cent is irrigated through ground water resources and the remaining 40 per cent is covered by surface water resources. Two interesting observations as discernible from the analysis already incorporated in the first chapter are: first, slightly more than 50 per cent of the utilisable surface and ground water is still available in the ditrict which can be tapped for the purposes of further irrigation and second, there exists a sizable amount of under-utilised irrigation potential which can be minimised to a considerable extent by bringing about maximum possible area under irrigation. Owing to under-utilisation of the existing irrigation potential in the district, the percentage of net irrigated area to net area sown was 36.38 per cent only in the year 1979-80. Whereas the corresponding percentage was much higher (52.43) at the state level during the year 1980-81.

The nature of rainfall in the district is characterised as erratic. The crops depending upon rainfall water, usually suffer from its erratic behaviour. With the result, there is loss of not only agricultural production but also the loss of property, human life, animal life, etc. But owing to data

constraints, efforts have been made in the subsequent paragraphs to assess and analyse the impact of drought on agricultural production only.

Drought conditions and its intensity have been measured in different ways by different organisations at different places. Majority of the organisations have fixed up a minimum level of rainfall moisture and the areas falling below that have been categorised as drought prone. Further, the extent of inadequacy of rainfall is considered as a pointer of the intensity of drought.

Following the above criterion it was found that drought conditions in the district prevailed during the years 1907-08, 1954-55, 1957-58, 1961-62, 1965-66, 1966-67, 1967-68, 1968-69 and 1969-70, besides the years 1971-72, 1972-73, 1973-74, 1974-75, 1975-76 and 1979-80 which were declared drought affected during the previous decade. The state government used to declare the district as drought affected during these years and seek financial assistance from the Central Government to meet the challenges of these emergent situations.

Besides, the method of 'Annawary' as initiated by the State Government was followed to identify drought years from the point of view of agricultural development during the previous decade. The criteria prescribed under this method were as follows:

- (i) Production normal-No drought.
- (ii) Production up to 75% of normal - No drought.
- (iii) Production 50% to 75% of normal - Moderate drought.

- (iv) Production varying from 25% to 50% of normal - Severe drought.
- (v) Production less than 25% of normal- Dangerous drought.

However, in actual practice, authorities used to declare a district as a drought affected only when the production was less than 50 per cent of the normal. The assessment was made by visual inspection of the fields by the officials and later on the senior officers excercised test checks. The identification of drought during the pendency of the cropping season was done only by visual inspection at the end of the cropping seasons. However, crop cutting experiments were conducted by the committee consisting of district level officers and the local representatives from different parts of the district. The yield was compared to the normal yield, which is defincd as an average yield of the last ten years.

With a view to assessing the impact of drought on agriculture and its severity over the period of 31 years (1950-51 to 1980-81), efforts have been made here to estimate the loss incurred in agriculture for the declared drought years. The total period of 31 years has been divided into two sub-periods, i.e., Pre-Green Revolution (1950-51 to 1964-65) and Post-Green Revolution (1965-66 to 1980-81). This division is made just to accomodate in analysis the technological changes introduced in Indian agriculture during the period of the Green Revolution .

The district of Allahabad was declared drought affected in the years 1954-55, 1957-58 and 1961-62 during the Pre-Green Revolution period and 1965-66, 1966-67, 1967-68, 1968-69, 1969-70, 1971-72, 1972-73, 1973-74, 1974-75, 1976-77 and 1979-80 during the Post Green Revolution period. The loss in agriculture is measured in terms of area, production and productivity separately for total foodgrains, sugarcane and potato.

An assessment of the impact of drought on agriculture for different drought years has been done by comparing the actuals of area, production and productivity of a particular drought year with the Normals of area, production and productivity, where Normal are defined as mean values of the time-series data of area, production and productivity separately for two sub-periods. The impact of drought on agriculture, thus, arrived at is shown in the table no.3.1.

It would be evident from the atable no.3.1 that out of the 14 declared drought years, only 8 years in foodgrains, 8 years in sugarcane and 11 years in potato experienced loss in cultivated area. Similarly 8 years in foodgrains, 7 years in sugarcane and 12 years in potato experienced production loss, whereas the number of years experiencing loss in productivity was 7 years in foodgrains, 8 years in sugarcane and 12 years in potato. The nature of drought is found to be most severe in the year 1968-69 followed by 1966-67, 1957-58 and 1974-75.

Table 3.1 - Impact of Drought on Agriculture in Respect

Of Foodgrains, Sugarcane and Potato.

| Sl. No. | Period/ No. Drought Years | Foodgrain Area | Sugarcane | Potato |
|---------|---------------------------|----------------|-----------|--------|
| 0       |                           | 1              | 2         | 3      |
| 1       | Pre-Green Revolution      | Period         | 4         | 5      |
| 1.      | 1954-55                   | -4.17          | -2.08     | 2.63   |
| 2.      | 1957-58                   | -6.57          | -24.76    | -19.08 |
| 3.      | 1961-62                   | 8.50           | 22.25     | 13.16  |
|         | Combined                  | -0.74          | -1.53     | -0.40  |
| 2       | Post-Green Revolution     | Period         | 6         | 7      |
| 1.      | 1965-66                   | -3.27          | -33.55    | -30.96 |
| 2.      | 1966-67                   | 2.45           | -47.55    | -48.55 |
| 3.      | 1967-68                   | 5.44           | 10.92     | 5.66   |
| 4.      | 1968-69                   | -7.23          | -35.35    | -30.00 |
| 5.      | 1969-70                   | 1.08           | 3.08      | 2.41   |
| 6.      | 1971-72                   | -5.57          | 8.60      | 15.54  |
| 7.      | 1972-73                   | 1.36           | 11.48     | 10.48  |
| 8.      | 1973-74                   | -2.78          | -10.27    | -7.59  |
| 9.      | 1974-75                   | -2.26          | -7.98     | -5.42  |
| 10.     | 1976-77                   | -4.31          | 23.14     | 29.28  |
| 11.     | 1979-80                   | 2.66           | -23.22    | -24.98 |
|         | Combined                  | -1.33          | -9.15     | -7.71  |
|         |                           |                | 1.53      | 1.53   |
|         |                           |                | -2.08     | -2.08  |
|         |                           |                | -3.57     | -3.57  |
|         |                           |                | -5.76     | -5.76  |
|         |                           |                | -18.33    | -18.33 |
|         |                           |                | -13.32    | -13.32 |

NOTE: Minus (-) indicates percentage loss to Normals, whereas plus (+) denotes the percentage gains.

SOURCE: Bulletin of Agricultural Statistics, Directorate of Agriculture U.P., Lucknow.

The above table also reveals that the frequency of drought in terms of number of declared drought years was much less (three years) in the Pre-Green Revolution period (1951-65) as compared to the period of Green Revolution and onwards (1965--81) during which the frequency of declared drought years was as high as eleven years. Consequently, on an average, the loss in agriculture is found to be of lower order in the former period as compared to the latter one. In its support, we observe that the loss of area in respect of foodgrains, and potato during the latter period was respectively 1.13 per cent and 5.76 per cent of their respective normal areas. However, there was a gain of 1.53 per cent in the area of sugarcane. Contrary to this, in the former period we find that there was a gain in terms of area in respect of sugarcane crop by 2.49 per cent of its normal. Besides, the loss in areas of foodgrains and potato crops was much lower, i.e., 0.74 and 4.20 per cent respectively.

Moreover, the loss of production in respect of foodgrains, sugarcane and potato during the latter period is also found to be of the order of 9.15 per cent, 2.08 per cent and 18.33 per cent respectively, whereas in case of the former period, the corresponding loss of production was to the tune of only 1.53 per cent, 5.69 per cent and 1.80 per cent respectively.

Besides, the loss of productivity in respect of foodgrains, sugarcane and potato during the latter period was estimated to be 7.71 per cent, 3.57 per cent and 13.32 per cent respectively. But in case of the former period

the corresponding loss of only 0.40 per cent was experienced in case of foodgrains, besides the gain of productivity in respect of potato by 2.60 per cent. However, the loss of productivity of sugarcane was higher, i.e., 7.94 per cent as compared to the latter period.

In the above context, it appears that adoption of seed-fertilizer irrigation technology during the Green Revolution period has not proved to be effective in minimising the adverse effect of drought on agriculture in the district. In fact, the adoption of aforesaid modern technology primarily rests upon the availability and use of irrigation facilities. In case of Allahabad district, we find that inspite of appreciable increase in major and minor irrigation sources, the utilisation of irrigation potential, thus, created is quite low (50.13 per cent). With the result, the irrigation coverage did not increase to the desired extent, restraining larger use of other agricultural inputs.

In some of the years, although there was a decline in area and production, the productivity showed a significant improvement. This appears to be sensible also because during drought years farmers, in general, make concerted efforts to make intensive use of cultivation on those pieces of land which are adequately served with assured means of irrigation. This enables them to make the maximum possible use of improved seeds, fertilizers and pesticides, finally resulting in higher productivity.

## CHAPTER - IV

### AGRICULTURE

Agriculture is the major source of livelihood for majority of the people in Allahabad district. In 1971, there were, in toto, about 9.49 lakh workers in the district, of which about 4.23 lakh were cultivators and 2.69 lakh agricultural labourers, representing 72 per cent of the total strength, besides 2.57 lakh other workers, Whereas in 1981 Census, out of the total workers of 11.05 lakh the proportion of cultivators and agricultural labourers decreased to 70.39 per cent. An interesting observation is that although the percentage of cultivators increased from 44.47 to 46.84 during the period 1971--81, the strength of agricultural labourers significantly decreased from 27.53 to 23.55 per cent.

#### 4.1 Operational Holdings

According to the following table, the total number of operational holdings with the farmers in the district, which was 4.77 lakh in 1970-71, considerably increased to 5.07 lakh during the year 1976-77, showing the growth of 6.21 per cent. On the other hand, operational area under these holdings showed a considerable decline from 5.44 lakh ha. in 1970-71 to 4.90 lakh ha. during 1976-77, showing the negative growth of 9.95 per cent.

Table 4.1 - Distribution of Land Holdings in  
Allahabad

| Sl. No. | Land Holdings Categories  | Number of Land Holdings |                    | Operational Area under holdings (ha.) |                    |
|---------|---------------------------|-------------------------|--------------------|---------------------------------------|--------------------|
|         |                           | 1970-71                 | 1976-77            | 1970-71                               | 1976-77            |
| 0       | 1                         | 2                       | 3                  | 4                                     | 5                  |
| 1.      | Below 1 ha.<br>(Marginal) | 335679<br>(70.33)       | 373726<br>(73.73)  | 120661<br>(22.19)                     | 130945<br>(26.74)  |
| 2.      | 1 - 2 ha.<br>(Small)      | 74453<br>(15.60)        | 74048<br>(14.60)   | 103521<br>(19.04)                     | 100584<br>(20.54)  |
| 3.      | 2- 4 ha.<br>(Semi-medium) | 42580<br>(8.92)         | 38735<br>(7.64)    | 117150<br>(21.54)                     | 103952<br>(21.23)  |
| 4.      | 54 - 10 ha.<br>(Medium)   | 19695<br>(4.13)         | 17058<br>(3.37)    | 115770<br>(21.28)                     | 97899<br>(19.99)   |
| 5.      | 10 and above<br>(Large)   | 4856<br>(1.02)          | 3338<br>(0.66)     | 86738<br>(15.95)                      | 56326<br>(11.50)   |
|         | Total                     | 477263<br>(100.00)      | 506905<br>(100.00) | 543840<br>(100.00)                    | 489706<br>(100.00) |

NOTE: Figures given in parentheses denote percentages to totals.

SOURCE: Statistical Bulletin-Allahabad, Office of the District Economics and Statistics Officer, Allahabad, U.P.

Further we observe an uneven distribution of land holdings in terms of both number and area in the district. The share of marginal holdings in total holdings in the district in 1970-71 as given in the above table, was 70.33 per cent, whereas the area covered under these holdings worked out to 22.19 per cent only. On the other hand, although the share of holdings of medium and large categories in total

holdings in 1970-71 was only 5.15 per cent, the area covered under these holdings recorded to be as high as 37.23 per cent. A similar kind of an uneven distribution of land holdings is also perceptible in the year 1976-77. The table further reveals that there has been an increase in land holdings in terms of both number and area during 1970-77 in the category of marginal farmers only. The proportion of land holdings in rest of the four categories, i.e. small, semi medium, medium and large, have shown a general decline during this period except the small holdings in which case although the area in absolute terms decreased, its proportion to total area of operational holdings increased from 19.04 per cent to 20.54 per cent. An increase in marginal holdings during the period under review may be attributed to sub-division and fragmentation of holdings belonging to medium and large categories, effective enforcement of the land ceiling act and distribution of surplus land among landless, marginal and small farmers. The average size of land holdings in the district in 1970-71 was 1.14 hectares which has significantly reduced to 0.97 hectare during 1976-77. Likewise the average size of land holdings at the state level has also decreased from 1.16 hectares in 1970-71 to 1.05 hectares during 1976-77.

#### 4.2 Land Use Pattern

The net area sown of the district in 1973-74, which was 4.79 lakh hectares, and constituted 64.91 per cent of the total reporting area, reduced to 4.60 lakh hectares in

1980-81. Thus, the share of net area shown in total reporting area went down to 62.94 per cent in 1980-81, as would be evident from the following table:-

Table 4.2 - Land Use Pattern in Allahabad

( ha.)

| Sl.<br>No. | Area/Land Use<br>Pattern              | 1973-74   |                 | 1980-81   |                 |
|------------|---------------------------------------|-----------|-----------------|-----------|-----------------|
|            |                                       | Area<br>0 | Percentage<br>1 | Area<br>2 | Percentage<br>3 |
| 4          | 5                                     |           |                 |           |                 |
| 1.         | Reporting Area                        | 737645    | 100.00          | 731147    | 100.00          |
| 2.         | Forest                                | 15761     | 2.14            | 20142     | 2.75            |
| 3.         | Culturable Waste                      | 44092     | 5.98            | 28903     | 3.95            |
| 4.         | Fallow Land                           | 66109     | 8.96            | 86585     | 11.84           |
| 5.         | Barren & Cultu-<br>rable Waste        | 36843     | 5.00            | 36476     | 4.99            |
| 6.         | Land put to Non-<br>Agricultural uses | 75186     | 10.19           | 79246     | 10.84           |
| 7.         | Posture                               | 977       | 0.13            | 1345      | 0.18            |
| 8.         | Trees and Groves                      | 19842     | 2.69            | 18321     | 2.51            |
| 9.         | Net Area sown                         | 478835    | 64.91           | 460129    | 62.94           |

SOURCE: Statistical Bulletin - Allahabad.  
Office of the District Economics and  
Statistics Officer, Allahabad, U.P.

As would be evident from the Annexure-I, the reduction in the net area sown was found in the six out of eight tehsils of the district during the period 1973-81. Phoolpur and Chayal were the two tehsils in which net area sown instead of decreasing showed a marginal increase. The reduction

in net area sown seems to have occurred with an increase in proportion of fallow land from 8.96 per cent in 1973-74 to 11.48 per cent during the year 1980-81. The man-land ratio, as worked out after dividing the total workers engaged in agriculture (cultivators and agricultural labourers) by the net area sown, which was 1.45 in the district in 1973-74, increased to 1.67 during 1980-81. Whereas the corresponding increase in man-land ratio at the state level was from 1.25 to 1.39 during this period. Thus, we notice an increase in pressure of population on land at both the levels during this period but with its higher intensity at the district level.

An increase in cropping intensity from 127 to 139 during the period 1973-81 was noticed; this might be an outcome of the increase in irrigation intensity and adoption of improved agricultural practices in the district.

The area of forest in the district increased from 15.76 thousand hectares in 1973-74 to 20.14 thousand hectares during 1980-81, showing the growth rate of 27.79 per cent. The highest proportion of forest area is found to be in Meja tehsil followed by Karchhana in both the years 1973-74 and 1980-81. Handia, Phoolpur and Chayal tehsils do not have forest area at all. The concentration of forest in Karchhana and Meja tehsils is obviously because of their locations in the neighbourhood of the forest of Madhya Pradesh.

The barren and culturable waste of the district was 5 per cent of the total reporting area in 1973-74 which remained almost the same (4.99%) during the year 1980-81. The share of land put to non-agricultural uses in the district was 10.19 per cent which increased to 10.84 per cent in the year 1980-81, the corresponding increases in Karchhana and Meja (DFAP tehsils) were from 9.12 and 7.13 per cent to 10.53 and 8.99 per cent respectively. Handia, Soraon, Mnjhanpur and Sirathu were the other four tehsils where the land put to non-agricultural uses also registered a marginal increase.

The pasture land in the district, which was 977 ha. (.13%) in 1973-74, increased to 1345 hectares (.18%) during 1980-81. The area under pasture land has increased in almost all the tehsils of the district during this period. The tehsils of Handia, Sirathu and Meja, which had no pasture land in 1973-74, were having it during 1980-81. Besides the area under trees and groves showed decline from 2.69 per cent in 1973-74 to 2.51 per cent during 1980-81.

#### 4.3 Area Under Different Crops

The gross cropped area in Allahabad increased from 6.08 lakh hectares in 1973-74 to 6.33 lakh hectares during 1980-81, showing the growth rate of 4.08 per cent during the period 1973-81. The area under foodgrain crops increased from 5.41 lakh ha. to 5.87 lakh ha. during this period, showing the growth rate of 8.58 per cent. This has led to

an increase in proportion of area under foodgrain crops to gross cropped area from 88.97 per cent in 1973-74 to 92.81 per cent during the year 1980-81, as would be evident from the following table:

Table 4.3 - Area Under Different Crops in Allahabad

| Sl.<br>No. | Crops               | 1973-74           | 1980-81           | Percentage increase<br>in 1980-81 over<br>1973-74 |   |
|------------|---------------------|-------------------|-------------------|---|---|
|            |                     | 0                 | 1                 | 2   | 3 |
| 1.         | Paddy               | 136877<br>(22.52) | 163018<br>(25.77) | 19.10   |   |
| 2.         | Maize               | 751<br>(.12)      | 868<br>(0.14)     | 15.58   |   |
| 3.         | Wheat               | 116075<br>(19.10) | 186907<br>(29.55) | 61.02   |   |
| 4.         | Other Cereals       | 160134<br>(26.35) | 126648<br>(20.02) | -20.91  |   |
| 5.         | Total Cereals       | 413837<br>(68.09) | 477441<br>(75.47) | 15.37   |   |
| 6.         | Urd                 | 472<br>(0.08)     | 607<br>(0.10)     | 28.60   |   |
| 7.         | Moong               | 114<br>(0.02)     | 8063<br>(1.27)    | 72.81   |   |
| 8.         | Gram                | 80573<br>(13.26)  | 67452<br>(10.66)  | -16.28  |   |
| 9.         | Arhar               | 24307<br>(4.00)   | 23533<br>(3.72)   | -3.18   |   |
| 10.        | Other Pulses        | 21446<br>(3.53)   | 10024<br>(1.58)   | -53.26  |   |
| 11.        | Total Pulses        | 126911<br>(20.88) | 109679<br>(17.34) | -13.58  |   |
| 12.        | Total<br>Foodgrains | 540748<br>(88.97) | 587120<br>(92.81) | 8.58  |   |
| 13.        | Lahri/<br>Mustard   | 1083<br>(0.18)    | 1250<br>(0.20)    | 15.42   |   |
| 14.        | Groundnut           | 32<br>(0.01)      | 29<br>(0.05)      | -9.38   |   |
| 15.        | Sugarcane           | 5322<br>(0.88)    | 2899<br>(0.46)    | -45.53  |   |

Contd. ..../-

| Sl.<br>No. | Crops                 | 1973-74            | 1980-81            | Percentage increase<br>in 1980-81 over<br>1973-74 |   |        |
|------------|-----------------------|--------------------|--------------------|---|---|--------|
|            |                       | 0                  | 1                  | 2   | 3 | 4      |
| 16.        | Potato                | 9242<br>(1.52 )    | 10999<br>(1.74)    |   |   | 19.01  |
| 17.        | Tobacco               | 74<br>(0.01)       | 51<br>(0.01)       |   |   | -31.08 |
| 18.        | Total<br>Common crops | 15753<br>(2.59)    | 15228<br>(2.41)    |   |   | -3.33  |
| 19.        | Other crops           | 51274<br>(8.44)    | 30245<br>(4.78)    |   |   | -41.01 |
| 20.        | Gross cropped<br>Area | 607775<br>(100.00) | 632593<br>(100.00) |   |   | 4.08   |

NOTE: Figures given in parentheses denote percentages to totals.

SOURCE: Statistical Bulletin-Allahabad. Office of the District Economics and Statistics Officer, Allahabad, U.P.

The area under Paddy, maize, wheat and moong showed a considerable increase, whereas the area under Gram and Arhar decreased significantly. As shown above, the area under commercial crops slided down marginally from 15,753 hectares to 15,228 hectares showing the negative growth of 3.33 per cent. As a result of this, the proportion of area under commercial crops also showed a marginal decline from 2.59 per cent in 1973-74 to 2.41 per cent during 1980-81. The area under sugarcane reduced to nearly 50 per cent, whereas that of potato showed an appreciable increase by 19.01 per cent, besides an increase in the area under

mustard oil by 15.42 per cent. The area under other crops like Sanai and fodder showed a drastic curtailment from 51,274 hectares to 30,245 hectares, exhibiting the negative growth rate of about 41 per cent.

The area covered under foodgrain crops during Kharif and Rabi Seasons and those occupied by commercial and other crops in different tehsils are given in the following table:

Table 4.4 - Percentage Area Under Different Crops

In the District Allahabad

| Sl. Tehsils/<br>No.  | Year    | Rabi    | Kharif | Commercial<br>Crops | Other<br>Crops | Gross<br>Cropped Area |
|----------------------|---------|---------|--------|---------------------|----------------|-----------------------|
| 0                    | 1       | 2       | 3      | 4                   | 5              | 6                     |
| <b>1. Handia:</b>    |         |         |        |                     |                |                       |
|                      | 1973-74 | 33.68   | 49.56  | 2.68                | 14.09          | 100.00                |
|                      | 1980-81 | 45.76   | 49.23  | 2.76                | 2.25           | 100.00                |
| <b>2. Phoolpur:</b>  |         |         |        |                     |                |                       |
|                      | 1973-74 | 35.41   | 51.68  | 3.20                | 9.71           | 100.00                |
|                      | 1980-81 | 41.05   | 46.27  | 2.74                | 9.81           | 100.00                |
| <b>3. Soraon:</b>    |         |         |        |                     |                |                       |
|                      | 1973-74 | 38.68   | 42.14  | 6.21                | 12.99          | 100.00                |
|                      | 1980-81 | 41.46   | 47.67  | 7.47                | 3.39           | 100.00                |
| <b>4. Chayal:</b>    |         |         |        |                     |                |                       |
|                      | 1973-74 | 45.73   | 46.81  | 1.75                | 5.71           | 100.00                |
|                      | 1980-81 | 46.22   | 45.97  | 1.48                | 6.33           | 100.00                |
| <b>5. Manjhapur:</b> |         |         |        |                     |                |                       |
|                      | 1973-74 | 42.79   | 50.06  | 3.48                | 3.68           | 100.00                |
|                      | 1980-81 | 43.22   | 52.95  | 2.18                | 1.66           | 100.00                |
| <b>6. Sirthu :</b>   |         |         |        |                     |                |                       |
|                      | 1973-74 | 39.32   | 46.32  | 2.62                | 11.74          | 100.00                |
|                      | 1980-81 | 45.21   | 48.53  | 2.38                | 3.88           | 100.00                |
| <b>7. Karchhana:</b> |         |         |        |                     |                |                       |
|                      | 1973-74 | 41.77   | 46.50  | 1.52                | 10.21          | 100.00                |
|                      | 1980-81 | 37.69   | 45.54  | 1.21                | 15.57          | 100.00                |
| <b>8. Meja:</b>      |         |         |        |                     |                |                       |
|                      | 1973-74 | 40.26   | 55.83  | 1.13                | 2.78           | 100.00                |
|                      | 1980-81 | 49.00   | 46.13  | 0.84                | 4.03           | 100.00                |
| <b>District:</b>     |         | 1973-74 | 39.89  | 49.09               | 2.60           | 8.43                  |
|                      |         | 1980-81 | 45.51  | 47.30               | 2.41           | 4.78                  |
|                      |         |         |        |                     |                | 100.00                |

SOURCE: Statistical Bulletin-Allahabad. Office of the Distt. Economics and Statistics Officer, Allahabad, U.P.

The above table indicates that the proportion of area covered under foodgrain crops during Kharif is generally higher in most of the tehsils as compared to Rabi season. In case of the former the coverage depends upon vagaries of monsoon, whereas the coverage in case of the latter is largely influenced by the availability of irrigation net work. An appreciable increase in area under foodgrain crops might be an outcome of the Government efforts during seventies to achieve self-sufficiency in foodgrains. Phoolpur, Soraon and Handia are the tehsils which have proportionately larger area under commercial crops as compared to other tehsils of the district. Besides, the area under other crops like Sanai and fodder in the district showed a considerable reduction from 8.43 per cent to 4.78 per cent, but the rate of its decline is strongly marked in Handia, Soraon and Sirathu tehsils.

The tehsil-wise data of area under different crops given in annexure-II, reveal that the proportion of area under foodgrain crops to gross cropped area showed a considerable increase in Handia, Soraon and Sirathu tehsils, whereas the corresponding proportion in rest of the tehsils remained almost constant during the period 1973--81. Moreover, the proportion of area under total pulses showed a considerable reduction not only at the district level but also in each and every tehsil. The proportion of area under potato showed a general increase, whereas the corresponding proportion of area under sugarcane showed a drastic curtailment.

#### 4.4 Yield per Hectare of Important Crops

Owing to non-availability of productivity data at the tehsil level, yield per hectare of important crops for the district has been analysed here. The yield per hectare of important crops for the period 1972--81 is shown in the following table.

According to the table no.4.5, average yields of Paddy, Maize, and Arhar show wide fluctuations during the period under review. This is obviously true because production of these food-grains is, by and large, subjected to vagaries of monsoon. Wheat, sugarcane and potato have shown a significant improvement in their productivity during this period. The average yield of wheat, which was 9.91 quintals per ha. in 1972-73, increased to 14.53 quintals during 1980-81. Besides, average yield of sugarcane increased from 292.61 quintals to 339.28 quintals and that of potato from 94.97 quintals to 139.69 quintals during this period. But average yields of Paddy, Maize, wheat, sugarcane and potato in the district are generally found to be lower than the corresponding yield rates at the state level.

Table 4.5 - Yield Per ha. of Important Crops

(qtl./ha.)

| Sl.<br>No.   | Crops  | Allahabad |        |        |        |        |        |        |        |        |         | State |
|--------------|--------|-----------|--------|--------|--------|--------|--------|--------|--------|--------|---------|-------|
|              |        | 72-73     | 73-74  | 74-75  | 75-76  | 76-77  | 77-78  | 78-79  | 79-80  | 80-81  | 1980-81 |       |
| 0            | 1      | 2         | 3      | 4      | 5      | 6      | 7      | 8      | 9      | 10     | 11      |       |
| 1. Paddy     | 8.82   | 8.68      | 6.21   | 8.54   | 8.19   | 12.13  | 12.23  | 2.79   | 9.66   | 10.53  |         |       |
| 2. Maize     | 10.97  | 9.62      | 3.83   | 9.87   | 9.18   | 9.55   | 10.49  | 6.67   | 4.19   | 7.31   |         |       |
| 3. Wheat     | 9.91   | 9.28      | 9.27   | 13.73  | 11.75  | 13.31  | 13.79  | 8.53   | 14.53  | 16.50  |         |       |
| 4. Gram      | 6.71   | 5.62      | 5.77   | 8.57   | 8.73   | 8.87   | 8.97   | 5.55   | 11.14  | 8.61   |         |       |
| 5. Arhar     | 30.18  | 14.91     | 19.13  | 19.44  | 33.94  | 23.08  | 28.27  | 22.14  | 39.39  | 14.48  |         |       |
| 6. Mustard   | 4.60   | 5.22      | 3.08   | 3.53   | 2.13   | 5.78   | 3.19   | 4.24   | 4.97   | 0.80   |         |       |
| 7. Sugarcane | 292.61 | 292.15    | 404.48 | 361.16 | 357.39 | 381.37 | 297.39 | 147.28 | 339.28 | 470.90 |         |       |
| 8. Potato    | 94.97  | 93.69     | 106.30 | 134.18 | 130.47 | 153.15 | 157.53 | 109.64 | 139.69 | 156.66 |         |       |

SOURCE: Statistical Bulletin-Allahabad. Office of the District Economics and Statistics Officer, Allahabad, U.P.

#### 4.5 Agricultural Production

The total production of foodgrains in the district in 1973-74 was 4,46,052 M.T., which significantly increased to 7,37,058 M.T. during 1980-81, showing growth rate of 65.24 per cent during the period 1973-81, as shown in the following table:

Table 4.6 - Agricultural Production Under Different

#### Crops in the District Allahabad

| Sl.<br>No. | Crops           | (M.T.)  |         |                      |
|------------|-----------------|---------|---------|----------------------|
|            |                 | 1973-74 | 1980-81 | Percentage<br>Growth |
| 0          | 1               | 2       | 3       | 4                    |
| 1.         | Paddy           | 118828  | 157441  | 32.48                |
| 2.         | Maize           | 723     | 363     | -50.07               |
| 3.         | Wheat           | 107740  | 271485  | 51.98                |
| 4.         | Other Cereals   | 124664  | 125109  | 0.36                 |
| 5.         | Total Cereals   | 351965  | 554398  | 57.52                |
| 6.         | Urd             | 306     | 163     | -46.73               |
| 7.         | Moong           | 30      | 5268    | 17460.00             |
| 8.         | Gram            | 45268   | 75136   | 65.98                |
| 9.         | Arhar           | 36240   | 92696   | 155.78               |
| 10.        | Other Pulses    | 12243   | 9397    | -23.25               |
| 11.        | Total Pulses    | 94087   | 182660  | 94.14                |
| 12.        | Total Foodgrain | 446052  | 737058  | 65.24                |
| 13.        | Lahi Mustard    | 565     | 622     | 10.09                |
| 14.        | Groundnut       | 25      | 23      | -8.00                |
| 15.        | Sugarcane       | 155482  | 98357   | -36.74               |
| 16.        | Potato          | 86586   | 153645  | 77.45                |
| 17.        | Tobacco         | 75      | 46      | -38.67               |

SOURCE: Statistical Bulletin-Allahabad. Office of the District Economics and Statistics Officer, Allahabad, U.P.

The percentage growth of total cereals during the period was 57.52, whereas the corresponding growth rate of total pulses was as high as 94.14 per cent. The growth rates of paddy and wheat accounted for 32.48 per cent and 51.98 per cent respectively. Similarly, there was a considerable increase in production of Moong, gram Arhar and Potato. But the production of Urd and Sugarcane showed a considerable reduction.

The tehsil wise break-up of the total production of foodgrains as given in Annexure-III tells us that tehsils of Meja, Karchhana and Handia contributed about 48 per cent of the total production of foodgrains in the district during 1980-81. In case of paddy, the highest contribution was made by Meja (19.45 per cent), followed by Karchhana (15.71 per cent). Also in case of wheat Meja contributed the highest (21.63 per cent) followed by Karchhana (16.53 per cent). Handia, Phoolpur and Soraon seem to have specialised in Moong cultivation. The contributions to the total production of pulses in the district are largely made by Meja, Karchhana and Chayal tehsils. Although the production of sugarcane showed a considerable decline during this period, the contribution of Handia and Manjhapur tehsils to its total production during 1980-81 is quite significant. The total production of potato in the district increased from 86586 M.T. in 1973-74 to 153645 M.T. during 1980-81, showing the growth rate of 77.45 per cent. Soraon is the

single tehsil contributing 44.85 per cent to the total production of potato in the district.

In view of the appreciable increase in total production of foodgrains, it is deemed relevant here to examine, whether the district has become self-sufficient in the matter of foodgrains or not. With this end in view, we observe that total production of foodgrains in the district during 1973-74 was 446052 M.T. which after allowing a margin of 10 per cent for seeds and storage losses comes to 401447 M.T. On the other hand, the requirement of total foodgrains for the total population according to the norm of 550 gm. per adult per day works out to 461926 M.T. Thus, the deficit of foodgrains in 1973-74 was of the order of about 60479 M.T. But as a result of the concerted efforts made in seventies to bring self-sufficiency in production of foodgrains, the district seems to have started producing surplus of foodgrains during 1980-81. In support of this, we observe that total production of foodgrains in the district increased to 737058 M.T., which after allowing a margin of 10 per cent for seeds and storage losses comes to 663352 M.T. On the other hand, the requirement of foodgrains for the total population of 21.43 lakh works out to 594578 M.T. according to the norm of 550 gm. per adult per day. Hence, the surplus of foodgrains produced in the district comes to 68774 M.T.

#### 4.6 Area Under High Yielding Varieties

The details of the area covered under high yielding varieties of paddy, maize and wheat are given in the annexure-IV.

According to the above mentioned annexure, the percentage of the total area covered under high yielding varieties of paddy, maize and wheat to the total area under these crops, which was 34.01 in the district in 1973-74, increased to 51.82 during 1980-81. In case of paddy, the coverage of area under high yielding varieties in the district in 1973-74 was 13.22 per cent which considerably increased to 38.24 per cent during 1980-81. Whereas the corresponding percentage in case of Maize was 7.19 in 1973-74 and 54.91 during 1979-80, besides the increase in coverage of area under high yielding varieties of wheat from 58.52 per cent to 64.86 per cent during this period.

We find wide fluctuations in the coverage of area under high yielding varieties from one tehsil to another. In case of high yielding varieties of paddy, the coverage was highest (58.51 per cent) in Soraon in 1973-74 followed by Handia (18.85 per cent) and Phoolpur (13.32 per cent). Again in the year 1979-80, Soraon stood first in the coverage of area under high yielding varieties of paddy followed by Meja (57.99 per cent) and Karchhana (34.79 per cent). On the other hand, in case of maize, the coverage of

area under high yielding varieties was the highest (68.75 per cent) in Chayal and the lowest (nil) in Handia, but in the year 1979-80 Meja was found on the top (90.59 per cent) and Phoolpur on the bottom (40.95 per cent). So far as the coverage of area under high yielding varieties of wheat is concerned, it was the highest (94.86 per cent) in Soraon and the lowest (24.28 per cent) in Meja tehsil in 1973-74. But during the year 1979-80 we observe certain changes, with the result Soraon still remains on the top (76.54 per cent) and Karchhana stands at the bottom (59.59 per cent). The coverage of area under high yielding varieties is generally found to be low in DPAP areas of both Meja and Karchhana tehsils.

#### 4.7 Consumption of Fertilizers

Consumption of fertilizer per hectare of gross cropped area in the district is found to be comparatively low. Its consumption per hectare of gross cropped area in the district in terms of N.P. and K. during 1980-81 was 34.12 kg., 6.67 kg. and 2.51 kg. respectively, whereas the corresponding figures at the State and regional levels worked out to 35.42 kg., 8.61 kg., 3.32 kg., and 36.57 kg., 9.02 kg., 4.02 kg., as would be evident from the following table:-

-: 55 :-

Table 4.7 - Consumption of Fertilizers Per Ha. of  
Gross Cropped Area During 1980-81

| Sl.<br>No. | Tehsils    | N.    | P.    | K.   | ( Kg.) |   |
|------------|------------|-------|-------|------|--------|---|
|            |            |       |       |      | 0      | 1 |
|            |            | 2     | 3     | 4    | 5      |   |
| 1.         | Handia     | 48.85 | 11.08 | 3.71 | 63.64  |   |
| 2.         | Phoolpur   | 41.47 | 9.80  | 3.26 | 54.53  |   |
| 3.         | Soraon     | 57.54 | 12.02 | 3.96 | 73.52  |   |
| 4.         | Chayal     | 71.11 | 8.99  | 4.01 | 84.11  |   |
| 5.         | Manjhanpur | 30.39 | 3.90  | 2.06 | 36.35  |   |
| 6.         | Sirathu    | 16.93 | 6.99  | 4.09 | 28.01  |   |
| 7.         | Karchhana  | 17.85 | 2.88  | 1.02 | 21.75  |   |
| 8.         | Meja       | 15.92 | 3.48  | 1.08 | 20.48  |   |
| <hr/>      |            |       |       |      |        |   |
| District   |            | 34.12 | 6.67  | 2.51 | 43.30  |   |
| <hr/>      |            |       |       |      |        |   |
| Region     |            | 36.57 | 9.02  | 4.02 | 49.61  |   |
| <hr/>      |            |       |       |      |        |   |
| U.P.       |            | 35.42 | 8.61  | 3.32 | 47.35  |   |

SOURCE: Statistical Bulletin-Allahabad.  
Office of the District Economics and  
Statistics Officer, Allahabad, U.P.

As shown above, there is a wide variation in the use of fertilizer per hectare of cropped area from one tehsil to another ranging from 15.92 kg. in Meja to 71.11 kg. in Chayal in case of N. 2.88 kg. in Karchhana to 12.02 kg. in Soraon in case of P and 1.02 in Karchhana to 4.09 kg. in Sirathu in case of K. The consumption of fertilizer in Meja and Karchhana tehsils (DPAP area) is extremely low as

compared to other tehsils of the district. In sum, the consumption of fertilizers combining N, P and K together in the district during 1980-81 comes to 43.30 kg. per ha. of gross cropped area as against 49.61 kg. and 47.35 kg. in the region and state. The use of fertilizer is found to be the highest (84.11 kg. per ha.) in Chayal followed by 73.52 kg. in Soraon, whereas the corresponding figures are found to be of the lower order in Meja (21.75 kg.) and Karchhana (20.48 kg.).

#### 4.8 Agricultural Implements

The use of agricultural implements is one of the indicators, reflecting modernisation in agriculture. According to Agricultural Census-1978, the number of Deshi ploughs per '000 ha. of net area sown in the district was 586 which varied from the lowest (443) in Meja tehsil to the highest (967) in Soraon. The corresponding number in case of Meston plough in the district was 73 with the minimum (32) in Meja and the maximum (113) in Soraon tehsil, as would be evident from the following table:

Table 4.8 - Agricultural Implements According to  
Agricultural Census 1978

| Sl.<br>No. | Tehsils  | Deshi          | Meston        | Harrow                 | Seed          | Debblar     | Tractor       | (Number/Per '000ha. of Net A. Sown) |
|------------|----------|----------------|---------------|------------------------|---------------|-------------|---------------|-------------------------------------|
|            |          | Plough         | Plough        | and<br>culti-<br>vator | Drill         |             |               |                                     |
| 0          | 1        | 2              | 3             | 4                      | 5             | 6           | 7             |                                     |
| 1.         | Handia   | 33663<br>(620) | 5980<br>(110) | 68<br>(1.25)           | 454<br>(8.36) | 3<br>(0.06) | 136<br>(2.50) |                                     |
| 2.         | Phoolpur | 33023<br>(766) | 4754<br>(110) | 8<br>(0.19)            | 301<br>(6.98) | 8<br>(0.19) | 139<br>(3.22) |                                     |
| 3.         | Soraon   | 41910<br>(967) | 4913<br>(113) | -                      | 412<br>(9.51) | -           | 75<br>(1.73)  |                                     |

Contd.../-

| Sl.<br>No. | Tehsils   | Deshi<br>Plough | Meston<br>Plouth | Harrow<br>and<br>Culti-<br>vator | Seed<br>Drill    | Debblor Tractor |               |
|------------|-----------|-----------------|------------------|----------------------------------|------------------|-----------------|---------------|
| 0          | 1         | 2               | 3                | 4                                | 5                | 6               | 7             |
| 4.         | Chayal    | 28203<br>(549)  | 4740<br>(92)     | 70<br>(1.36)                     | 475<br>(9.25)    | 100<br>(1.95)   | 48<br>(0.93)  |
| 5.         | Manjhapur | 25733<br>(537)  | 2098<br>(44)     | 235<br>(4.90)                    | 285<br>(5.94)    | 25<br>(0.52)    | 51<br>(1.06)  |
| 6.         | Sirathu   | 23449<br>(645)  | 2622<br>(72)     | 132<br>(3.63)                    | 293<br>(8.06)    | 4090<br>(113)   | 33<br>(0.91)  |
| 7.         | Karchhana | 42377<br>(519)  | 5605<br>(69)     | 84<br>(1.03)                     | 1577<br>(19.30)  | 147<br>(1.80)   | 173<br>(2.12) |
| 8.         | Meja      | 42738<br>(443)  | 3105<br>(32)     | -                                | 9278<br>(96.16)  | 18<br>(0.19)    | 228<br>(2.36) |
|            | District  | 273126<br>(586) | 34243<br>(73)    | 597<br>(1.28)                    | 13077<br>(28.05) | 4391<br>(9.42)  | 931<br>(2.00) |

SOURCE: Statistical Bulletin-Allahabad. Office of the District Economics and Statistics Officer, Allahabad, U.P.

It is clear from the above table that the use of Harrow and cultivator in the district is almost negligible i.e. 1.28 per '000 ha. of net area shown. It is found to be the highest (4.90) in Manjhapur tehsil. The tehsils of Soraon and Meja are not making use of this implement at all. Seed drillers are being used widely in the district. The number of Seed drills per '000 ha. of net area sown is found to be 28.05 in the district, whereas the corresponding number is the highest (96.16) in Meja tehsil and the lowest

(5.94) in Manjhanpur tehsil. This implement seems to be most popular in DPAP Areas of both Meja and Karchhana tehsils. The tractors are being used in each and every tehsil. The number of tractors per '000 ha. of net area sown is found to be two in the district, whereas the corresponding number is the highest (3.22) in Phoolpur tehsil and the lowest (0.91) in Sirathu. A relatively higher use of tractors is found in Phoolpur, Handia, Karchhana and Meja tehsils.

#### 4.9 Seed and Fertilizer Stores, Cold Storage and Agro-Service Centres

Agricultural inputs like seed, fertilizer, pesticides, etc., are invariably needed for adoption of modern agricultural practices. Judging from this angle, we observe that the number of seed and fertilizer stores in the district during 1981-82 was 261, out of which 245 were located in rural areas and the rest 16 were found in urban areas, as would be evident from the following table:

Table 4.9 - Tehsil-wise Centres for Seed Storage, Fertilizer, Cold storage and Agro-Service Centres in District, Allahabad(1982)

| Sl. No.  | Tehsils    | Seed Store and Fertilizer |       | Cold storage |              | Village Stores |              | Agro Service |              | Gobar |         |        |
|----------|------------|---------------------------|-------|--------------|--------------|----------------|--------------|--------------|--------------|-------|---------|--------|
|          |            | Depots                    | Store | No. Capacity | No. Capacity | No. Capacity   | No. Capacity | M.T.         | No. Capacity | M.T.  | Centres | Plants |
| 0        |            | 1                         | 2     | 3            | 4            | 5              | 6            | M.T.         | 7            | 8     | 9       | 10     |
| 1.       | Hanua      | 40                        | 1175  | 4            | 20           | —              | —            | M.T.         | 5            | 500   | —       | 10     |
| 2.       | Phoolpur   | 27                        | 726   | 3            | 20           | 3              | 11407        | M.T.         | 2            | 200   | 1       | 23     |
| 3.       | Sorson     | 38                        | 1027  | 4            | 93           | 7              | 38683        | M.T.         | 6            | 600   | 1       | 5      |
| 4.       | Chayal     | 26                        | 603   | 3            | 15           | —              | 10           | M.T.         | 1000         | —     | 6       | 90     |
| 5.       | Manjhanpur | 23                        | 460   | 3            | 20           | —              | 5            | M.T.         | 500          | —     | 3       | 35     |
| 6.       | Sirathu    | 20                        | 542   | 2            | 10           | —              | —            | M.T.         | —            | 2     | 5       | 15     |
| 7.       | Karchhana  | 39                        | 1072  | 4            | 20           | 1              | 4550         | M.T.         | 100          | 1     | 7       | 65     |
| 8.       | Meja       | 32                        | 705   | 4            | 20           | 1              | 4750         | M.T.         | 100          | —     | 15      | 65     |
| Urban    |            | 16                        | 36757 | 1            | 15           | 16             | 72468        | M.T.         | —            | —     | 7       | —      |
| District |            | 261                       | 43068 | 28           | —            | 28             | 131858       | M.T.         | 30           | 3000  | 6       | 82     |
|          |            |                           |       |              |              |                |              |              |              |       |         | 561    |

SOURCE: Statistical Bulletin-Allahabad. Office of the District Economics and Statistics Officer, Allahabad, U.P.

The total capacity of the above mentioned stores was 43068 M.T. of which 6311 M.T. was available in rural areas and the remaining 36757 M.T. in urban areas. These stores are dispersed in all the tehsils. Handia, Soraon, Karchhana and Meja tehsils were having maximum numbers of these stores.

Moreover, there are, in all, 28 pesticides depots in the district, out of which 27 are located in rural areas and the remaining one is located in urban area. There are 28 cold storages in the district, out of which 12 are located in rural areas and the remaining 16 are found in urban areas. There are 30 village godowns having capacity of 3000 M.T., located in rural areas of the district. Maximum number of godowns (10) is in Chayal tehsil and the minimum in Meja and Karchhana, where only one village godown is available in each tehsil. Sirathu tehsil does not have any village godown. Besides, there are 6 Agro-service centres in the district, of these 5 are located in rural areas with their locations in Phoolpur, Soraon, Sirathu and Karchhana. Apart from these, there are 82 other Agro-Service centres, of which 75 are located in all the tehsils of rural areas and the remaining seven in urban areas. As shown above, Gobar Gas Plants are available in each of the tehsils but their number is relatively less in Manjhapur and Chayal tehsils. Tehsil-wise classification of villages according to their distances from seed-cum-fertilizer stores and agro-service centres shown in the following table:-

Table 4.10 - Location of Villages According to Their Distances from Seed-cum-Fertilizer Stores and Agro-Service Centres in Allahabad 1982

| Sl. No. Tehsils/<br>District | Seed-cum-Fertilizer Stores |                           |              |                            |  | Agro Service Centres |              |                            |                      |              |                             |
|------------------------------|----------------------------|---------------------------|--------------|----------------------------|--|----------------------|--------------|----------------------------|----------------------|--------------|-----------------------------|
|                              | In the Village<br>0        | Less than<br>1-3 Km.<br>1 | 3-5 Km.<br>2 | 5 Km.<br>and<br>above<br>3 | In the Village<br>than<br>One Km.<br>4 | Less<br>1-3 Km.<br>5 | 3-5 Km.<br>6 | 5 Km.<br>and<br>above<br>7 | Less<br>1-3 Km.<br>8 | 3-5 Km.<br>9 | 5 Km.<br>and<br>above<br>10 |
| 1. Handia                    | 40                         | 18                        | 75           | 87                         | 381                                    | 11                   | 20           | 36                         | 75                   | 459          |                             |
| 2. Phoolpur                  | 27                         | 33                        | 86           | 175                        | 181                                    | 24                   | 29           | 58                         | 103                  | 288          |                             |
| 3. Soron                     | 38                         | 10                        | 112          | 91                         | 164                                    | 6                    | 14           | 23                         | 25                   | 347          |                             |
| 4. Chayal                    | 26                         | 13                        | 39           | 102                        | 129                                    | 6                    | 16           | 50                         | 61                   | 176          |                             |
| 5. Manjhanpur                | 23                         | 11                        | 30           | 47                         | 158                                    | 3                    | 7            | 12                         | 16                   | 231          |                             |
| 6. Sirathu                   | 20                         | 15                        | 37           | 69                         | 109                                    | 7                    | 8            | 15                         | 12                   | 208          |                             |
| 7. Karchhana                 | 39                         | 44                        | 79           | 103                        | 317                                    | 8                    | 35           | 82                         | 98                   | 359          |                             |
| 8. Meja                      | 32                         | 19                        | 99           | 121                        | 332                                    | 15                   | 40           | 45                         | 48                   | 455          |                             |
| District 245                 |                            | 163                       | 557          | 795                        | 1771                                   | 80                   | 169          | 321                        | 438                  | 2533         |                             |

SOURCE: Statistical Bulletin-Allahabad. Office of the District Economics and Statistics Officer, Allahabad, U.P.

According to the above table, there are 245 villages which have got seed and fertilizer stores located within the village. There are 720 villages, farmers of which have to travel nearly 3 km. for procuring agricultural inputs, whereas the farmers of the remaining 2566 villages have to travel beyond 3 km. to avail this facility. Moreover, the facilities of agro-service centres are available in 80 villages only and 490 villages get this facility within the radius of 3 km. But the remaining 2971 villages are located beyond 3 km. from the agro-service centres. Hence, we find that only small proportion of villages have got agro-service centre facilities within the village and farmers of the rest of the villages have to travel longer to procure their agricultural inputs.

## CHAPTER - V

### IRRIGATION

The sources of irrigation available in Allahabad district consist of both major and minor. The minor irrigation works, which are being used for irrigation purposes in the district include state/private tube-wells, pumping sets, Blast wells, masonry wells with and without persian wheels, ponds, tanks, lakes, etc. The canal is the second major source of irrigation in the district. The tehsil-wise length/number of existing irrigation sources of Allahabad district for the year 1981-82 is given in the following table.

It would be evident from the table no. 5.1 that the total length of canals in the district during 1980-81 was 2294 Km. with the highest length of canal (792 Km.) in Meja and the lowest (30 Km.) in Handia tehsil. Out of total 841 state tubewells in 1980-81, 339 were located in Handia tehsil followed by Phoolpur (156), Chayal (104) and Karchhana (100). Whereas, the minimum number of state tubewells (21) was found in Nanjhanpur tehsil. The private tubewells in the district in 1980-81 were 17,937. Soraon tehsil is found to have the largest number of private tubewells while Meja tehsil has got the lowest number of these tubewells. A close observation of the table no.5.1 suggests that the tehsils having relatively larger length of canal have less number of tubewells and vice versa. Among the private sources of minor irrigation there were,

Table 5.1 - Tehsil-wise Number and Length of Irrigation Sources  
In Allahabad District

| Sl. No. | Tehsil/District | Length of Canal Tube (Km.) | Govt. Tube-wells (No.) | Private wells (No.) | Masonry wells (No.) | Persian wells (No.) | Pumping sets (No.) | Pit Boring (Blast Well) (No.) | Bandhi (Hect.) |
|---------|-----------------|----------------------------|------------------------|---------------------|---------------------|---------------------|--------------------|-------------------------------|----------------|
| 0       | 1               | 2                          | 3                      | 4                   | 5                   | 6                   | 7                  | 8                             | 9              |
| 1.      | Handia          | 30                         | 339                    | 3124                | 2858                | -                   | 657                | 35                            | -              |
| 2.      | Fhoolpur        | 56                         | 156                    | 3189                | 2174                | 4                   | 221                | 21                            | -              |
| 3.      | Soraon          | 170                        | 20                     | 3629                | 3431                | -                   | 385                | 2                             | -              |
| 4.      | Chayal          | 89                         | 104                    | 2520                | 2385                | 7                   | 142                | 11                            | -              |
| 5.      | Manjhanpur      | 317                        | 21                     | 1817                | 1974                | 10                  | 309                | 29                            | -              |
| 6.      | Sirathu         | 127                        | 65                     | 2361                | 3347                | 3                   | 132                | 6                             | -              |
| 7.      | Karchhana       | 723                        | 100                    | 976                 | 2606                | 17                  | 1326               | 25                            | 1273           |
| 8.      | Meja            | 792                        | 36                     | 316                 | 2882                | 142                 | 1156               | -                             | 3037           |
|         | District        | 2294                       | 841                    | 17937               | 21657               | 183                 | 4328               | 129                           | 4360           |

SOURCE: Statistical Bulletin-Allahabad. Office of the District Economics and Statistics Officer, Allahabad, U.P.

in all, 4328 pumping sets in the district during the year 1980-81. Of these pump sets, the larger number of 1326 and 1156 were found in Karchhana and Meja tehsils. There were 129 pit boaring in different tehsils of the district except Meja. Besides, the total number of Bandhis for irrigation in the district was 4360 and these were found in Karchhana and Meja tehsils only.

The number of masonry wells in the district in 1980-81 was 21,840, out of which only 183 were fitted with persian wheels. Maximum number of masonry wells was found in Soraon tehsil followed by Sirathu, Handia, Meja and Karchhana tehsils.

The irrigated area by different sources of irrigation and the changes in their respective positions during the period 1976-81 in the district reveal that the number of tubewells (both state and private) experienced the highest growth as compared to canals and masonry wells. Moreover, the number of other sources of irrigation has also shown a considerable increase during this period.

The total irrigated area of the district in 1975-76 was 1,52,663 hectares which increased to 1,99,649 hectares during 1980-81, showing a growth of 30.78 per cent. The highest growth of 69.76 per cent in irrigated area is experienced in Meja tehsil and the lowest growth of 4.29 per cent in Karchhana. The contribution of tubewells to total irrigated area of the district which was 90.89 per cent

in 1975-76, increased to 92.76 per cent during 1980-81, showing the growth rate of 22.57 per cent. Almost all the tehsils of the district excepting Manjhanpur, have experienced positive growth in the area irrigated by tubewells. The Meja tehsil has the highest growth of 179.43 per cent while the Sirathu has the lowest positive growth of 1.96 per cent, as would be evident from the table No.5.2.

The contribution of canals to the total irrigated area of the district was 31.74 per cent in 1975-76, which increased to 37.96 per cent during 1980-81. Handia was the only tehsil in the district where irrigated area by canal remained nil in both the years, 1975-76 and 1980-81. Phoolpur tehsil has the highest (2440.00 per cent) growth in the irrigated area by canal. The irrigated area by masonry wells in the district has gone down from 13.31 per cent in 1975-76 to 6.66 per cent in 1980-81 with negative growth of 34.56 per cent. Phoolpur tehsil has experienced highest negative growth ( 79.26 per cent) in irrigated area followed by Chayal, Karchhana, Handia and Soraon tehsils. The highest positive growth (42.35 per cent) of irrigated area by masonry wells in the district during 1976-81 was observed in Sirathu and the lowest (21.59 per cent) in Meja tehsil. The percentage of irrigated area by ponds tanks and lakes to total net irrigated area in the district declined from 3.61 in 1975-76 to 2.44 in 1980-81 showing the negative growth of 11.56 per cent with the highest

Table 5.2 - Source-wise Irrigation in the District Allahabad

| Sl. No.        | Tahsils          | Canals           | Percent-<br>tage |       | Tube-wells |        | Percent-<br>tage |       | Wells  |       | Percent-<br>tage |        | Tank, Lakes<br>and Ponds |       | Percent-<br>tage |       |
|----------------|------------------|------------------|------------------|-------|------------|--------|------------------|-------|--------|-------|------------------|--------|--------------------------|-------|------------------|-------|
|                |                  |                  | 75-76            | 80-81 | 75-76      | 80-81  | 75-76            | 80-81 | 75-76  | 80-81 | 75-76            | 80-81  | 75-76                    | 80-81 | 75-76            | 80-81 |
| 1. Handia      |                  |                  | 10               | 1     | 2          | 3      | 4                | 45    | 6      | 7     | 8                | 9      | 10                       | 11    | 12               | 13    |
| 2. Phoolpur    | 105<br>(0.57)    | 2667<br>(9.51)   | 2440.00          | 12477 | 23486      | 88.23  | 3847             | 798   | -79.26 | 1840  | 1071             | -41.79 |                          |       |                  |       |
| 3. Soraon      | 11063<br>(43.85) | 16005<br>(51.95) | 44.67            | 10362 | 11953      | 15.35  | 3287             | 1948  | -40.74 | 493   | 839              | 70.18  |                          |       |                  |       |
| 4. Chayal      | 530<br>(4.00)    | 375<br>(2.23)    | -29.25           | 9373  | 15037      | 60.43  | 2975             | 1316  | -55.76 | 218   | 117              | -46.33 |                          |       |                  |       |
| 5. -Manjhanpur | 3458<br>(23.98)  | 7100<br>(41.01)  | 105.32           | 7676  | 7611       | -85    | 2814             | 2115  | -24.84 | 475   | 487              | 2.53   |                          |       |                  |       |
| 6. Sirathu     | 457<br>(3.75)    | 2498<br>(16.31)  | 434.90           | 9370  | 9554       | 1.90   | 2078             | 2958  | 42.35  | 534   | 308              | -42.32 |                          |       |                  |       |
| 7. Karchhana   | 15861<br>(59.59) | 16748<br>(70.46) | 5.59             | 4665  | 5444       | 16.70  | 1601             | 739   | -53.84 | 353   | 265              | -24.93 |                          |       |                  |       |
| 8. Meja        | 16973<br>(82.31) | 30189<br>(86.24) | 77.86            | 593   | 1657       | 179.43 | 1820             | 2213  | 21.59  | 1155  | 302              | -73.85 |                          |       |                  |       |
| District       | 48457<br>(31.74) | 75783<br>(37.96) | 56.39            | 77793 | 104117     | 33.84  | 20315            | 13295 | -34.56 | 5508  | 4871             | -11.56 |                          |       |                  |       |

NOTE: Figures given in parentheses denote percentage to totals.

SOURCE: Statistical Bulletin-Allahabad. Office of the District Economics and Statistics Officer, Allahabad, U.P.

Contd. Table-5.2

| Sl.<br>No. | Tehsils       | Other Sources  | Percentage    |         | Total Irrigated Area | Percentage |
|------------|---------------|----------------|---------------|---------|----------------------|------------|
|            |               |                | 1975-76       | 1980-81 |                      |            |
| 0          | 1             | 14             | 15            | 16      | 17                   | 18         |
| 1.         | Hendia        | (-)            | 67<br>(0.22)  | -       | 25610                | 30758      |
| 2.         | Phoolpur      | -<br>(-)       | 13<br>(0.05)  | -       | 18269                | 28035      |
| 3.         | Soraon        | 27<br>(0.11)   | 63<br>(0.20)  | 133.33  | 25232                | 30808      |
| 4.         | Chayal        | 170<br>(1.28)  | 4<br>(0.02)   | -97.65  | 13266                | 16849      |
| 5.         | Manjhapur     | -              | -             | -       | 14423                | 17313      |
| 6.         | Sirthu        | -              | -             | -       | 12449                | 15318      |
| 7.         | Karchhana     | 313<br>(1.37)  | 574<br>(2.41) | 83.39   | 22793                | 23770      |
| 8.         | Meja          | 80<br>(0.39)   | 646<br>(1.86) | 707.50  | 20621                | 35007      |
| District   | 590<br>(0.38) | 1583<br>(0.79) | 168.31        | 152663  | 199649               | 30.78      |

NOTE : Figures given in parentheses denote percentages to totals.

SOURCE : Statistical Bulletin-Allahabad. Office of the District Economics and Statistics Officer, Allahabad, U.P.

negative growth in Meja tehsil. Handia, Soraon and Manjhanpur had the positive growth in irrigated area by ponds, lakes, etc. The percentage share of 'other sources' in total irrigated area of the district is negligible in the district as well as in most of the tehsils.

It would be evident from the following table that the total irrigation potential created in the district in 1975-76 was about 3.31 lakh hectares which increased to about 3.98 lakh hectares during 1980-81, showing the growth of 20.45 per cent. On the other hand, utilisation of the total irrigation potential created during this period increased from about 1.53 lakh hectares to about 2 lakh hectares, showing the growth of 30.72 per cent, indicating thereby that intensive efforts are being made to step up the existing irrigation potential of the district. However, there is still a wide scope for augmenting the utilization of irrigation potential, which increased from 46.17 per cent in 1975-76 to 50.13 per cent during the year 1980-81.

Table 5.3 - Extent of Utilization of Irrigation

## Potential in District

( ha.)

| Sl.<br>No. | Particulars            | 1975-76              |                   | 1980-81              |                   |
|------------|------------------------|----------------------|-------------------|----------------------|-------------------|
|            |                        | Irrigation Potential |                   | Irrigation Potential |                   |
|            |                        | Created              | Utilised          | Created              | Utilised          |
| 0          | 1                      | 2                    | 3                 | 4                    | 5                 |
| 1.         | Major Irrigation Works | 135800               | 48457<br>(35.68)  | 143520               | 75783<br>(52.80)  |
| 2.         | Minor Irrigation Works | 194827               | 104206<br>(53.49) | 254718               | 123866<br>(48.63) |
|            | Total                  | 330627               | 152663<br>(46.17) | 398238               | 199649<br>(50.13) |

NOTE : Figures given in parentheses denote percentages to totals.

SOURCE : Based on -Statistical Bulletin- Allahabad.  
Office of the District Economics and Statistics  
Officer, Allahabad, U.P.

As shown above, the percentage utilisation of irrigation potential which in case of major irrigation works was 35.68 in 1975-76 increased to 52.80 per cent during the year 1980-81. But this percentage utilisation in case of minor irrigation works, showed a considerable decline from 53.49 to 48.63 during this period. It also transpires from the above table that under utilisation of total irrigation potential created in the district reduced from 53.83 per cent in 1976-77 to 49.87 per cent during 1980-81. Although the under utilisation of irrigation works than

that of minor irrigation works, it has decreased in case of the former but has considerably increased in case of the latter. In sum, we observe that there has been a tremendous increase in irrigation potential and its utilisation in the district during the period, as a result of these increasing trends, the percentage of net irrigated area to net area sown has increased significantly from 29.01 in 1973-74 to 42.83 during 1980-81. Besides, the percentage of gross irrigated area to gross cropped area increased from 26.30 in 1973-74 to 37.39 during 1980-81. Although the irrigation potential and its utilisation has increased, a higher rate of utilisation is still required for a speedy development of agriculture in the district. Besides, the percentage of irrigated area to the total area of all crops was 26.30 in 1973-74 which increased to 37.39 during 1980-81. The percentage increase in the irrigated area of cereals and pulses was by 11.96 points and 1.42 points respectively during 1973-74 and 1980-81 while irrigated area of commercial crops declined by 6.96 points during these static years as shown in the following table:-

Table 5.4 - Tehsil-wise Irrigated Area Under Different Crops

| Sl. No. | Tehsils   | 1973-74 |                   |                   | Commercial           |                      |                      | Total Irrigated      |                      |                      |                      |    |
|---------|-----------|---------|-------------------|-------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----|
|         |           | Cereals | Pulses            | Oilseeds          | Total Irrigated Area |    |
|         |           | 1       | 2                 | 3                 | 4                    | 5                    | 6                    | 7                    | 8                    | 9                    | 10                   | 11 |
| 1.      | Handia    | 49785   | 19183<br>(38.53)  | 8114<br>(37.79)   | 3066<br>(37.79)      | 28                   | N.A.                 | 1838<br>(98.97)      | 1819<br>(98.97)      | 69564<br>(36.93)     | 25693                |    |
| 2.      | Phoolpur  | 42023   | 15067<br>(35.85)  | 10562<br>(27.44)  | 2898<br>(27.44)      | 43                   | N.A.                 | 1890<br>(95.13)      | 1798<br>(95.13)      | 60379<br>(39.09)     | 23605                |    |
| 3.      | Soraon    | 49350   | 22909<br>(46.42)  | 7959<br>(16.13)   | 1284<br>(16.13)      | 32                   | N.A.                 | 4372<br>(99.50)      | 4350<br>(99.50)      | 70923<br>(36.81)     | 26108                |    |
| 4.      | Chayal    | 40135   | 10735<br>(26.75)  | 20748<br>(8.72)   | 1809<br>(8.72)       | 92                   | N.A.                 | 1059<br>(99.43)      | 1053<br>(99.43)      | 65794<br>(20.07)     | 13208                |    |
| 5.      | Menjhapur | 36828   | 10404<br>(28.25)  | 17779<br>(16.07)  | 2857<br>(16.07)      | 38                   | N.A.                 | 2011<br>(99.50)      | 2001<br>(99.50)      | 58816<br>(25.18)     | 14811                |    |
| 6.      | Sirathu   | 28265   | 9101<br>(32.20)   | 12525<br>(18.28)  | 2290<br>(18.28)      | 90                   | N.A.                 | 1161<br>(96.99)      | 1126<br>(96.99)      | 47630<br>(26.69)     | 12720                |    |
| 7.      | Karchhana | 73901   | 17481<br>(23.65)  | 25591<br>(7.65)   | 1958<br>(7.65)       | 407                  | N.A.                 | 1315<br>(93.54)      | 1230<br>(93.54)      | 112715<br>(19.69)    | 22199                |    |
| 8.      | Maja      | 93550   | 16678<br>(17.83)  | 23633<br>(4.19)   | 1068<br>(4.19)       | 385                  | N.A.                 | 992<br>(90.22)       | 895<br>(90.22)       | 121954<br>(17.65)    | 21530                |    |
|         | District  | 413837  | 121558<br>(29.37) | 126911<br>(13.58) | 17230                | 1115                 | -                    | 14638<br>(97.50)     | 14272<br>(97.50)     | 607775<br>(26.30)    | 159874               |    |

Table 5.4 Contd.

| Sl. No.      | Tehsils        | 1980-81           |                   |                 |                  |            |                  |                  |                   |            |                  |
|--------------|----------------|-------------------|-------------------|-----------------|------------------|------------|------------------|------------------|-------------------|------------|------------------|
|              |                | Cereals           |                   |                 | Pulses           |            |                  | Oilseeds         |                   |            | Commercial Crops |
| Total Area   | Irrigated Area | Total Area        | Irrig- ated Area  | Total Area      | Irrig- ated Area | Total Area | Irrig- ated Area | Total Area       | Irrig- ated Area  | Total Area |                  |
| 0.           | 1.             | 12.               | 13.               | 14.             | 15.              | 16.        | 17.              | 18.              | 19.               | 20.        | 21.              |
| 1. Handia    | 62332          | 30103<br>(48.29)  | 8370<br>(47.63)   | 3987<br>(4.03)  | 372              | 15         | 2555             | 2013<br>(78.79)  | 74431<br>(47.53)  | 35376      |                  |
| 2. Phoolpur  | 56371          | 24657<br>(43.74)  | 8848<br>(33.04)   | 2923<br>(7.44)  | 215              | 16         | 2344             | 1985<br>(84.68)  | 74577<br>(41.50)  | 30952      |                  |
| 3. Soraon    | 56061          | 27640<br>(49.30)  | 5632<br>(34.00)   | 1915<br>(25.00) | 136              | 34         | 5353             | 5104<br>(95.35)  | 69210<br>(54.96)  | 38039      |                  |
| 4. Chayal    | 43345          | 14365<br>(33.14)  | 16239<br>(7.31)   | 1187<br>(11.63) | 172              | 20         | 830              | 816<br>(98.31)   | 64634<br>(27.29)  | 17635      |                  |
| 5. Manjhapur | 43145          | 14314<br>(33.18)  | 14791<br>(15.68)  | 2319<br>(24.26) | 169              | 41         | 1248             | 1211<br>(97.04)  | 60247<br>(31.72)  | 19108      |                  |
| 6. Sirathu   | 32432          | 12745<br>(39.30)  | 10189<br>(22.31)  | 2273<br>(21.19) | 335              | 71         | 890              | 887<br>(99.66)   | 45468<br>(37.66)  | 17122      |                  |
| 7. Karchhana | 69297          | 26754<br>(38.61)  | 19415<br>(3.70)   | 719<br>(0.17)   | 1798             | 3          | 1147             | 1022<br>(89.10)  | 106500<br>(27.46) | 29272      |                  |
| 8. Meja      | 100691         | 45247<br>(44.94)  | 23766<br>(3.50)   | 831<br>(0.48)   | 3962             | 19         | 817              | 693<br>(84.82)   | 130826<br>(35.37) | 46279      |                  |
| District     | 477441         | 197308<br>(41.33) | 109679<br>(15.00) | 16453<br>(3.08) | 7132             | 220        | 15377            | 13923<br>(90.54) | 632593<br>(37.39) | 23649      |                  |

NOTE : Figures given in parentheses denote percentages to totals.

SOURCE : Statistical Bulletin-Allahabad. Office of the District Economics and Statistics Officer, Allahabad, U.P.

## CHAPTER - VI

### ANIMAL HUSBANDRY AND FISHERIES

#### 6.1 Livestock

Animal husbandry is one of the important allied activities in rural areas which helps villagers supplement their family income. It is, however, contingent upon the livestock population which is available across the districts in the state. The availability of livestock population per hectare of geographical area is a measure of agricultural input as animal power, availability of milch cattle for production of milk and also a source of raw material for tanning and leather industries. According to the livestock Census of 1972, the total livestock population of the district was 18.55 lakh which decreased to 18.28 lakh during 1978, showing the negative growth of 1.46 per cent during the period 1972--78. Contrary to this, the growth rate of livestock population in the state was 6.39 per cent during this period. The livestock population per hectare of geographical area available in the district in 1972 was 2.51 which decreased to 2.48 during 1978. A decline in the total number of livestock population in the district may be on account of relatively less availability of fodder and other grazing facilities and deficient medical services. Allahabad is one of the potential districts in the matter of livestock population which is spread among all the tehsils, with the highest concentration in Soraon followed by Karchhana and Meja tehsils.

The proportion of milch animals (cows and sheep buffaloes) to the total livestock population in the district in 1972 was 22.66 per cent which increased to 22.77 per cent during 1978, as would be evident from the following table:-

Table 6.1 - Livestock Population in Allahabad and

Uttar Pradesh

| Sl.<br>No.                | Animal Category     | Allahabad           |                      | Uttar Pradesh        |           |
|---------------------------|---------------------|---------------------|----------------------|----------------------|-----------|
|                           |                     | 1972<br>0           | 1978<br>1            | 1972<br>2            | 1978<br>3 |
| 1. Cattles:               |                     |                     |                      |                      |           |
| (i) Males over 3 years    | 508328              | 509091              | 13694146             | 13633705             |           |
| (ii) Females over 3 years | 240930              | 224801              | 6744579              | 6650092              |           |
| (iii) Young stock         | 196181              | 174547              | 5778566              | 5489538              |           |
| Total                     | 945493<br>(50.97)   | 908439<br>(49.70)   | 26217291<br>(53.29)  | 25773335<br>(49.24)  |           |
| 2. Buffaloes:             |                     |                     |                      |                      |           |
| (i) Males over 3 years    | 29132               | 30667               | 1626579              | 1839724              |           |
| (ii) Females over 3 years | 179308<br>(9.67)    | 191354<br>(10.47)   | 1585962<br>(13.39)   | 7287786<br>(13.92)   |           |
| (iii) Young stock         | 104701              | 119783              | 4379819              | 4837241              |           |
| Total                     | 313141<br>(16.88)   | 341804<br>(18.70)   | 125921360<br>(25.59) | 13964751<br>(26.68)  |           |
| 3. Sheep and Goat         | 444723<br>(23.97)   | 436648<br>(23.89)   | 8565533<br>(17.41)   | 10521127<br>(20.10)  |           |
| 4. Other livestock        | 151813<br>(8.18)    | 140917<br>(7.71)    | 1823134<br>(3.71)    | 2084874<br>(3.98)    |           |
| Total Livestock           | 1855116<br>(100.00) | 1827808<br>(100.00) | 49198966<br>(100.00) | 52344633<br>(100.00) |           |
| Poultry Birds             | 195170              | 182985              | 3920293              | 5497520              |           |

NOTE : Figures given in parentheses denote percentages to final totals.

SOURCE: Livestock Censuses, 1972 and 1978.  
Board of Revenue, U.P., Lucknow.

On the other hand, the corresponding proportion of milch animals at the state level declined from 27.10 per cent in 1972 to 26.62 per cent during 1978. Thus, the proportion of milch cattle available in the district is comparatively low. Among the milch animals, the proportion of cows works out to be higher than she-buffaloes in the district in both the censuses. But in case of state, although the similar trend is perceptible in 1972, the position is found to be reversed in 1978 with higher proportion of she-buffaloes as against cows.

The total strength of sheep and goat, which was 23.97 per cent in the district in 1972, slightly decreased to 23.89 per cent during 1978. Whereas the corresponding percentages at the state level worked out to 17.41 and 20.10 respectively. Thus, the position of the district in regard to the availability of sheep and goat is found to be better as compared to the state. The proportionately higher concentration of sheep and goat in Allahabad district is probably due to suitable climatic conditions, and better grazing facilities, particularly in Meja and Karchhana tehsils. The average milk yield per she-buffalo per day is reported to be 1.70 litres in the district, whereas the corresponding estimate of milk yield at the State level works out to 2.90 litres.

The total poultry birds available in the district were 1.95 lakh in 1972 which reduced to 1.82 lakh during 1978, showing the negative growth of 6.67 per cent,

whereas contrary to this, the growth of poultry birds in the state is found to be 40.23 per cent during the same period.

#### 6.2 Veterinary Institutions

To provide the health cover to the existing livestock population, there were 41 veterinary hospitals, 21 artificial insemination centres/ sub-centres and 41 stock-man centres in the District in 1973-74 which during the year 81-82 increased to 46, 94 and 77 respectively. The number of artificial insemination centres increased more than four times and those of stockman centres approximately twice during this period, as would be clear from the following table:

Table 6.2 - Veterinary Institutions in Allahabad District

| Sl.<br>No. | Veterinary Institutions                       | 1973-74 | 1981-82 | Percentage<br>increase in<br>1981-82 over<br>1973-74 |
|------------|---|---------|---------|--|
|            |   | 0       | 1       | 2  |
| 1.         | Veterinary Hospitals                          | 41      | 46      | 12.20  |
| 2.         | No. of Livestock/<br>per Hospital             | 45247   | 39750   |  |
| 3.         | Artificial Insemination<br>Centre/sub-centres | 21      | 94      | 347.62   |
| 4.         | No. of milch cattle per<br>centre/sub-centre  | 20016   | 4398    |  |
| 5.         | Stock-man Centre                              | 41      | 77      | 87.80  |
| 6.         | No. of Milch Cattle<br>per Centre             | 10252   | 5368    |  |

SOURCE: Statistical Bulletin-Allahabad. Office of the District Economics and Statistics Officer, Allahabad, U.P.

Besides, there were 43 sheep/goat development centres and 5 piggery development centres in the district. The live-stock population per veterinary hospital in the district, which was 45247 in 1973-74, decreased to 39750 during 1981-82, whereas the corresponding number at the state level worked out to 44403 and 45086 respectively. Similarly, the number of milch cattle per artificial insemination centre/sub-centre and per stock-man centre were 20016 and 10252 in 1973-74 which decreased to 4393 and 5368 respectively in 1981-82. Inspite of appreciable increase in different types of veterinary institutions during seventies, their existing strength still fall short off the norms prescribed under intensive cattle development project (5000 breedable bovine population per veterinary hospital and 1000 milk animals per stock man centre).

Inter-tehsil variations in veterinary institutions during 1980-81 are shown in the following table:

Table 6.3 - Livestock Population per Veterinary Institution in the District  
(As per Livestock Census 1978)

| Sl. No.<br>Tehsils/District | Veterinary Hospital | Livestock Population Per Stockman Centre | Artificial Insemination Centre | Sheep and Goat Development Centre |
|-----------------------------|---------------------|--|--------------------------------|-----------------------------------|
| 1. Handia                   | 42976               | 19535                                    | 19535                          | 6614                              |
| 2. Phoolpur                 | 31715               | 13592                                    | 10015                          | 7260                              |
| 3. Soraon                   | 34478               | 24134                                    | 17239                          | 28747                             |
| 4. Chayal                   | 29177               | 22693                                    | 13616                          | 9270                              |
| 5. Manjhanpur               | 56158               | 33695                                    | 56158                          | 9626                              |
| 6. Sirathu                  | 43875               | 25072                                    | 25072                          | 12608                             |
| 7. Karchhana                | 39616               | 39616                                    | 19808                          | 9354                              |
| 8. Meja                     | 47769               | 22047                                    | 35826                          | 11079                             |
| DISTRICT                    | 39751               | 23747                                    | 19453                          | 10183                             |

SOURCE: Livestock Census, 1978. Board of Revenue, U.P., Lucknow.

The livestock population available per veterinary hospital in the district during 1978 was 39,751 with maximum (56158) in Manjhanpur tehsil and the minimum (29177) in Chayal tehsil. The tehsils which had livestock population per veterinary hospital above the district level average include Meja, Sirathu, Manjhanpur and Handia which in other wards means that these tehsils are relatively less served with veterinary hospital facilities. Moreover, we observe that the tehsils of Karchhana, Sirathu, Manjhanpur and Soraon are deficient in respect of the availability of stockman centre. Besides, artificial insemination centres are found to be deficient in Meja, Karchhana, Sirathu, Manjhanpur and Handia tehsils. There seems to be inadequacy of sheep and goat development centres in Soraon, Sirathu and Meja tehsils. The shortage of veterinary institutions is generally marked in Manjhanpur, Sirathu and tehsils. Piggery development centres are located mainly in Chayal, Manjhanpur, Karchhana and Meja tehsils, whereas poultry units are largely concentrated in Handia, Chayal, Karchhana and Meja tehsils. There are only two tehsils (Manjhanpur and Sirathu) which do not have milk cooperative societies at all. However, in rest of the tehsils we observe that these societies are concentrated mainly in Karchhana Chayal and Handia tehsils. Another table showing adequacy or inadequacy of Artificial Insemination Centres Stockman Centres in different tehsils is given below:

Table 6.4 - Percentage of Villages Within the  
 Radius of 3 Km . from Artificial  
 Insemination Centres and Stockman  
 Centres

(1980-81)

| Sl.<br>No. | Tehsils    | Percentage of Villages within the<br>radius of 3 km. from |                  |       |
|------------|------------|---|------------------|-------|
|            |            | Artificial Insemina-<br>tion Centres                      | Stockman Centres |       |
| 0          | 1          | 2   | 3                |       |
| 1.         | Handia     | 16.31   |                  | 18.97 |
| 2.         | Phoolpur   | 48.41   |                  | 47.81 |
| 3.         | Soraon     | 27.71   |                  | 27.47 |
| 4.         | Chayal     | 23.30   |                  | 6.80  |
| 5.         | Manjhanpur | 11.15   |                  | 21.56 |
| 6.         | Sirathu    | 14.80   |                  | 18.40 |
| 7.         | Karchhana  | 13.06   |                  | 15.29 |
| 8.         | Meja       | 13.10   |                  | 20.56 |
| District   |            | 21.24   |                  | 24.38 |

SOURCE: Statistical Bulletin-Allahabad.  
 Office of the District Economics and Statistics  
 Officer, Allahabad, U.P.

Following the distance criterion we observe that the percentage of villages within the radius of 3 kms. from Artificial Insemination Centres in the district during 1980-81 was 21.24, whereas the corresponding percentages worked out to be the highest (48.41) in Phoolpur and the lowest (11.15) in Manjhanpur tehsils. The tehsils having these percentages below the district level average included

Handia, Manjhanpur, Sirathu, Karchhana and Meja tehsils.

On the other hand, the corresponding coverage of villages within the radius of 3 kms. from stockman centres in the district was 24.38. The tehsils of Phoolpur and Soraon were found to be above the district level average and the rest of the tehsils had facilities of stockman centres below the district average. While summing up, Phoolpur and Soraon tehsils are found to be much advanced in respect of veterinary services, whereas these facilities are comparatively of lower order in Karchhana, Meja and Sirathu tehsils.

### 6.3 Fisheries

The total water area under pisciculture in the district during 1981-82 was 500 ha., concentrated mainly in two tehsils of Karchhana and Meja. Among these two tehsils, Meja had the higher percentage (61.60) of this area than Karchhana (38.40).

Table 6.5 - Tehsilwise Progress of Pisciculture in  
Allahabad in 1981-82

| Sl. No. | Tehsils   | Area (ha.)        | Production (Qtl.) | Distribution of fingerlings ('000) | Fishermen Cooperative Societies (Number) |
|---------|-----------|-------------------|-------------------|------------------------------------|--|
| 0       | 1         | 2                 | 3                 | 4                                  | 5  |
| 1.      | Handia    | -                 | -                 | 129<br>(5.62)                      | 2-                                       |
| 2.      | Phoolpur  | -                 | -                 | 22<br>(0.95)                       | -  |
| 3.      | Soraon    | -                 | -                 | 118<br>(5.14)                      | -  |
| 4.      | Chayal    | -                 | -                 | 621<br>(27.09)                     | 4  |
| 5.      | Manjhapur | -                 | -                 | 73<br>(3.18)                       | -  |
| 6.      | Sirathu   | -                 | -                 | 152<br>(6.62)                      | -  |
| 7.      | Karchhana | 192.00<br>(38.40) | 1973<br>(24.32)   | 292<br>(12.71)                     | 1  |
| 8.      | Meja      | 308.80<br>(61.60) | 61.41<br>(75.68)  | 890<br>(38.75)                     | 1  |
|         | District  | 500.00            | 81.14             | 2297                               | 8  |

NOTE : Figures given in parentheses denote percentages to totals.

SOURCE: Statistical Bulletin, Allahabad. Office of the District Economics and Statistics Officer, Allahabad, U.P.

As the above table shows, out of the total 2297 thousand fingerlings distributed in the district, Meja tehsil received the largest share (38.75 per cent) while the Phoolpur

received the lowest (0.95 per cent) in the district. The contribution of fish production through pisciculture in the district was highest (75.68 per cent) in Meja tehsil and the lowest (24.32 per cent) in Karchhana tehsil. The per hectare production of fish in the district comes to 0.16 quintals.

Out of the existing 8 fisheries cooperative societies in the district, four are located in Chayal tehsil, while of the remaining four, two are in Handia and one each in Karchhana and Meja tehsils.

## CHAPTER - VII

### INDUSTRY

Industrialisation plays the crucial role in increasing both income and employment. Allahabad is one of the industrially developed districts of the State. The contribution of primary sector to the total net domestic product in the district in 1970-71 was 81.55 per cent, which is considerably low as compared to the corresponding contributions of Eastern Region (87.19 per cent) and the State (87.10 per cent), as would be evident from the following table:-

Table 7.1 - Sectoral Contributions to total Net

Domestic Product

(Percentage)

| Sl.<br>No. | Sector    | 1970-71             |                   | 1980-81   |                   |
|------------|-----------|---------------------|-------------------|-----------|-------------------|
|            |           | Allahabad<br>Region | Eastern<br>Region | Allahabad | Eastern<br>Region |
| 0          | 1         | 2                   | 3                 | 4         | 5                 |
| 1.         | Primary   | 81.55               | 87.19             | 71.94     | 85.27             |
| 2.         | Secondary | 18.45               | 12.81             | 28.06     | 14.73             |
|            | Total     | 100.00              | 100.00            | 100.00    | 100.00            |

SOURCE : District Domestic Net output-Uttar Pradesh, Economics and Statistics Division, S.P.I., Lucknow.

After lapse of a decade, the contribution of primary sector to the total net domestic product in the district during 1980-81 further decreased to 71.94 per cent which is again significantly low as compared to the region

(85.27 per cent) and the State (83.61 per cent). On the other hand, the contribution of manufacturing sector to the total net domestic product, which was 18.45 per cent in the district in 1970-71, increased to 28.06 per cent during the year 1980-81, whereas the corresponding (percentages at the regional and state levels worked out to 12.81 and 12.90 per cent in 1970-71 and 14.73 and 16.39 per cent during 1980-81 respectively. Thus, the situation of industrial development in the district appears to be much better than that of the Eastern Region and the State. A relatively higher pace of industrial development of the district is also witnessed by the fact that the annual growth rates of output of registered and unregistered manufacturing industries in the district during the years 1971-72 and 1976-77 were 12.5 and 11.6 p.r cent respectively, whereas the corresponding figures at the regional level stood at 0.9 and 2.7 per cent only.

Turning to the aspect of employment, we observe that the share of workers engaged in agriculture to the total workers was 62.38 per cent in the district in 1971 which increased to 70.40 per cent during the year 1981, whereas the corresponding share of workers engaged in non-agricultural sector showed a simultaneous decrease from 37.62 per cent in 1971 to 29.60 per cent during the year 1981. Contrary to this, at the regional level there was a decline in share of workers engaged in agriculture to total workers

from 79.66 per cent in 1971 to 78.91 per cent during 1981, whereas the corresponding share of non-agricultural workers increased from 20.34 per cent to 21.09 per cent during this period. Inspite of slight increase in the percentage share of non-agricultural workers at the regional level, it is found to be lower in the region as compared to the district during both the years i.e. 1970-71 and 1980-81. Thus, the contribution of manufacturing sector in terms of income and employment, is found to be significantly higher in the district, exhibiting some signs of higher pace of industrialisation.

#### 7.1 Industrial Units

Up to the year 1980-81, there were, in all, 181 industrial units in the district registered under Factories Act, 1948, with total employment of 23,570 persons and annual production of Rs.13.31 lakh. Besides, there were 2941 small scale industrial units in the district registered with Directorate of Industries, Kanpur. The total employment provided by these units is estimated to be 29,965 workers. Moreover, there were about 2941 unregistered cottage and village industries in the district during 1980-81, providing total employment to about 30 thousand persons. The tehsilwise details of registered and unregistered industrial units are given in the following table:

Table 7.2 - Tehsilwise Details of Registered and  
Unregistered Industrial Units  
During 1980-81

| Sl. No. | Tehsils    | No. of registered units | Average daily employment (persons) | Value of production ('000) | Per capita output (Rs.) | No. of small scale industrial units | Workers employed (No.) | Unregistered factories | Workers (persons) |
|---------|------------|-------------------------|------------------------------------|----------------------------|-------------------------|-------------------------------------|------------------------|------------------------|-------------------|
| 0       | 1          | 2                       | 3                                  | 4                          | 5                       | 6                                   | 7                      | 8                      | 9                 |
| 1.      | Handia     | -                       | -                                  | -                          | -                       | 1492                                | 11357                  | 1492                   | 11351             |
| 2.      | Phoolpur   | 1                       | 84                                 | 12994                      | 102                     | 273                                 | 2637                   | 273                    | 2637              |
| 3.      | Soraon     | 2                       | 133                                | 5668                       | 71                      | 183                                 | 2551                   | 183                    | 2551              |
| 4.      | Chayal     | 4                       | 330                                | 8873                       | 31                      | 121                                 | 1041                   | 121                    | 1041              |
| 5.      | Manjhanpur | -                       | -                                  | -                          | -                       | 208                                 | 1333                   | 81                     | 631               |
| 6.      | Sirathu    | -                       | -                                  | -                          | -                       | 67                                  | 508                    | 194                    | 1210              |
| 7.      | Karchhana  | 2                       | 30                                 | 3610                       | 10                      | 365                                 | 9120                   | 365                    | 9120              |
| 8.      | Meja       | -                       | -                                  | -                          | -                       | 232                                 | 1418                   | 232                    | 1418              |
|         | Urban      | 172                     | 22993                              | 1299934                    | 939                     | -                                   | -                      | -                      | -                 |
|         | District   | 181                     | 23570                              | 1330999                    | 352                     | 2941                                | 29965                  | 2941                   | 29965             |

SOURCE: Statistical Bulletin-Allahabad. Office of the  
District Economics and Statistics Officer, Allahabad,  
U.P.

As would be evident from the above table, the industrial units registered under Factories Act, 1948, are found to be located mainly in Chayal, Soraon, Karchhana and Phoolpur tehsils. The tehsils of Handia, Manjhanpur, Sirathu and Meja do not have any such registered units at all. The maximum value of annual production among the units located in rural areas was in Phoolpur (Rs.129.94 lakh) followed by the tehsils of Chayal, Soraon and Karchhana, where the values of annual production during 1980-81 were Rs.87.73 lakh, 56.68 lakh and Rs.36.10 lakh respectively. The number of workers employed in these Factories was 23570.

8800

The unregistered cottage and village industries are found to be widely scattered in different tehsils of the district. However, a relatively larger concentration of these industrial units is found to be in Handia, Karchhana, Meja, Phoolpur and Manjhanpur tehsils.

#### 7.2 Industrial Estate

There are two industrial estates available in the district for catering to the needs of entrepreneurs to set up industrial units. So far 4 sheds have been allotted to the entrepreneurs who have set up industries of their own. Besides, 47 plots have been allotted to the entrepreneurs for construction of sheds. Out of the total 47 allottees so far only 17 have constructed their sheds. The number of

persons employed in different types of industrial units functioning in these industrial estates is 400 and the total annual production is worth Rs.3 lakh. The details of the progress made in these industrial estates during the three successive years are given below:-

Table 7.3 - Progress of the Industrial Estates  
in Allahabad District

| Sl.<br>No. | Particulars                  | 1979-80 | 1980-81 | 1981-82 |
|------------|------------------------------|---------|---------|---------|
|            |                              | 1       | 2       | 3       |
| 1.         | Number of industrial estates | 2       | 2       | 2       |
| 2.         | Number of Sheds:             |         |         |         |
|            | (a) Distributed              | 5       | 4       | 4       |
|            | (b) Functioning              |         |         |         |
| 3.         | Number of Plots:             |         |         |         |
|            | (a) Distributed              | 46      | 46      | 47      |
|            | (b) Functioning              | 17      | 19      | 19      |
| 4.         | Persons Employed             | 300     | 325     | 400     |
| 5.         | Production '000 Rs.          | 162     | 175     | 300     |

SOURCE: Statistical Bulletin-Allahabad. Office of the Distt.  
Statistics and Economics Officer, Allahabad,  
U.P.

As stated earlier, the district experienced a considerable progress in industrialisation during seventies. An interesting phenomenon is that expansion of industrial activities is not confining to certain pockets only but these are widely scattered across the tehsils. This may be attributed to the favourable impact brought about by the effective implementation of Rural Industries Project in the district.

### 7.3 Handloom

Up to the end of the Fourth Five Year Plan, the number of handlooms in cooperative sector in the district was 1216, which increased to 1296 during March 1978. The production of handloom clothes also increased from 1.44 lakh meters to 1.62 lakh meters during this period. The number of Handloom Weavers Cooperative Societies in the district at the end of the Fourth Plan was 27, which increased to 28 during March 1978. Beside this, most of the woolen handlooms available in the district are concentrated in Handia tehsil and are functioning under cooperative sector. Besides, the number of agro-based industries is also growing fast in the district. Jhua and Bharuari are the two major foodgrain marketing centres where various types of processing units are located.

## CHAPTER - VIII

### SOCIO-ECONOMIC INFRASTRUCTURE

Infrastructure plays a catalytic role in the process of development. It is generally defined as comprising the basic services and public utilities essential to the economy. It is also termed as social overhead capital which is invested before an economy 'takes off' into sustained growth. The two major components of the infrastructure are economic and social. The former comprises power, road, transport and banking whereas the latter includes education, medical services, drinking water facility, etc. Both components are cause as well as effect of economic advancement. Here we intend to assess and analyse the level of development in socio-economic infrastructure of Allahabad district with major focus on its spatial distribution at the tehsil level. The components selected for this purpose relate to electricity/power, road, banking, education, medical & health services, etc.

#### 8.1 Roads

Road is one of the important economic infrastructure which increases movement of the people and goods and helps in expansion of economic activities. The average road length per '000 sq.km. of area available in the district at the end of 1980-81 was 453.96 km., whereas the corresponding length per lakh of population worked out to 86.86 km. On the other hand, the corresponding length of pucca roads

at the state level was 201 km. per '000 sq.km. of area and 58 km. per lakh of population. The tehsilwise details in this regard are given in the following table:-

Table 8.1 - Road Net-Work in Allahabad Druing 1980-81

| Sl. No. | Tehsils    | Total length of roads | Length of roads per '000 sq.km. area | Length of roads per lakh of population | Number of villages within the radius of 3 kms. from Pucca road |
|---------|------------|-----------------------|--------------------------------------|--|--|
| 0       | 1          | 2                     | 3                                    | 4                                      | 5  |
| 1.      | Handia     | 433                   | 561.39                               | 95.37                                  | 348<br>( 57.90)  |
| 2.      | Phoolpur   | 377                   | 450.70                               | 81.00                                  | 308<br>(61.35)   |
| 3.      | Soraon     | 296                   | 437.35                               | 70.81                                  | 257<br>(61.93)   |
| 4.      | Chayal     | 247                   | 353.87                               | 66.76                                  | 185<br>(59.87)   |
| 5.      | Manjhanpur | 264                   | 371.99                               | 89.80                                  | 164<br>(60.97)   |
| 6.      | Sirathu    | 284                   | 564.39                               | 102.16                                 | 156<br>(62.40)   |
| 7.      | Karchhana  | 661                   | 489.88                               | 143.38                                 | 350<br>(60.14)   |
| 8.      | Meja       | 675                   | 393.68                               | 166.26                                 | 329<br>(54.56)   |
|         | Urban      | 201                   | 2140.58                              | 28.71                                  | -  |
|         | District   | 3298                  | 453.96                               | 86.86                                  | 2097<br>(59.39)  |

NOTE : Figures given in parentheses denote percentages to totals.

SOURCE : Statistical Bulletin-Allahabad. Office of the District Economics and Statistics Officer, Allahabad, U.P.

The table indicates that the highest road length per '000 sq.km. of area in 1980-81 was available in Sirathu tehsil (564.39 km.) followed by Karchhana (489.88 km.). The rest of the tehsils had this infrastructure below the district level average. On the other hand, considering population as a denominator we find that Meja tehsil from the point of view of availability of pucca road stood at the highest (166.26 km. per lakh of population) and Chayal at the lowest (66.76 km.), as against the corresponding figure of 86.86 km. in the district. The tehsils of Handia, Manjhanpur, Sirathu, Karchhana and Meja are found above the district level average and rest of the tehsils are found to be backward in this regard.

Moreover, judging from the distance criterion we find quite even distribution of roads in different tehsils of the district. As shown in the above table, the percentage of villages situated within the radius of 3 km. from pucca roads in the district during 1980-81 was 59.39, whereas the corresponding percentage was found to be the highest (62.40) in Sirathu and the lowest (54.56) in Meja tehsil. The tehsils having this percentage above the district level average include Meja, Karchhana, Sirathu, Soraon and Phoolpur and rest of the tehsils are comparatively deficient in road net work.

#### 8.2 Electricity/Power

Electricity/Power is another important infrastructure which plays a crucial role in development of both agriculture

and industry. In this connection, we observe that percentage of villages electrified to the total number of villages in the district in 1973-74 was 36.10 which increased to 57.58 during the year 1981-82, as would be evident from the following table:-

Table 8.2 - Tehsilwise Percentage of Villages

Electrified to the total Villages

| Sl.<br>No. | Tehsils    | 1973-74                 |                        | 1981-82                 |                        |
|------------|------------|-------------------------|------------------------|-------------------------|------------------------|
|            |            | Electrified<br>Villages | % to total<br>Villages | Electrified<br>Villages | % to total<br>Villages |
| 0          | 1          | 2                       | 3                      | 4                       | 5                      |
| 1.         | Handia     | 391                     | 60.10                  | 520                     | 86.52                  |
| 2.         | Phoolpur   | 292                     | 58.10                  | 386                     | 76.89                  |
| 3.         | Soraon     | 119                     | 28.60                  | 323                     | 77.83                  |
| 4.         | Chayal     | 107                     | 34.60                  | 170                     | 55.02                  |
| 5.         | Manjhanpur | 68                      | 25.30                  | 137                     | 43.49                  |
| 6.         | Sirthu     | 68                      | 27.20                  | 117                     | 46.80                  |
| 7.         | Karchhana  | 125                     | 21.50                  | 210                     | 36.08                  |
| 8.         | Meja       | 102                     | 16.90                  | 170                     | 28.19                  |
| District   |            | 1272                    | 36.10                  | 2033                    | 57.58                  |

SOURCE: Statistical Bulletin-Allahabad. Office of the District Economics and Statistics Officer, Allahabad, U.P.

Whereas the corresponding percentages at the state level increased from 18.41 to 34.31 during this period. Moreover, inter-tehsil analysis reveals that Meja and Karchhana are the most backward tehsils of the district with respect to power development, whereas the tehsils of Handia, Phoolpur and Soraon are found to be the most forward in this regard. The tehsils of Handia, Phoolpur and Soraon are found to be above the district level average, whereas rest of the tehsils are lagging behind it. The percentage of villages electrified to total villages in 1981-82 was the highest (86.52) in Handia tehsil and the lowest(28.19) in Meja tehsil.

The per capita consumption of electricity in the district in 1979-80 was 148 KWH/hr. which increased to 150 KWH/hr. during 1980-81, whereas the corresponding figures at the state level worked out to 87 KWH/hr. in each of these static years. This means that the district is above the state level average not only in rural electrification but also in per capita consumption of power.

### 8.3 Banking Institutions

Banking institutions play a significant role in expansion of economic activities through providing loans to the development of agriculture, industry and other productive activities. In Allahabad, there were, in all 207 bank branches at the end of 1981-82, as would be evident from the following table:-

Table 8.3 - Scheduled Commercial Banks and Classification of Villages on the Basis of Their Distance from Cooperative and Commercial Banks.

( 1981-82)

| Sl.<br>No. | Tehsils    | Total<br>Branches | Per Branch<br>Office Pop-<br>ulation | Number and percentage<br>of Villages within the<br>Radius of 3 km. from<br>Commercial and other<br>Banks. |
|------------|------------|-------------------|--------------------------------------|---|
| 0          | 1          | 2                 | 3                                    | 4   |
| 1.         | Handia     | 14                | 32410                                | 89 (14.80)  |
| 2.         | Phoolpur   | 16                | 26009                                | 130 (25.90)   |
| 3.         | Soraon     | 22                | 19020                                | 128 (30.80)   |
| 4.         | Chayal     | 11                | 33621                                | 73 (23.60)  |
| 5.         | Manjhanpur | 9                 | 32612                                | 64 (23.80)  |
| 6.         | Sirathu    | 8                 | 34695                                | 47 (18.80)  |
| 7.         | Karchhana  | 20                | 23029                                | 101 (17.40)   |
| 8.         | Meja       | 17                | 23921                                | 156 (25.90)   |
| <hr/>      |            |                   |                                      |   |
|            | Urban      | 90                | 7788                                 | -   |
| <hr/>      |            |                   |                                      |   |
|            | District   | 207               | 18343                                | 788 (22.30)   |

NOTE : Figures given in parentheses denote percentages to totals.

SOURCE: Statistical Bulletin-Allahabad. Office of the District Economics and Statistics Officer, Allahabad, U.P.

Inter-tehsil distribution of these bank branches reveals that the highest concentration of these branches (22) is in Soraon, whereas the corresponding concentration is the lowest (8) in Sirathu tehsil. The population served in the former per bank branch is 19,020, whereas in case of the latter this figure comes to as high as 34,695.

Moreover, the percentage of villages falling within the radius of 3 km. from the bank branches in the district during 1981-82 was 22.3, whereas the corresponding percentage was the highest (30.8) in Soraon tehsil and the lowest(14.8) in Handia tehsil. The tehsils which had these percentages above the district level average include Phoolpur, Soraon Chayal and Manjhanpur, whereas rest of the tehsils were found to be deficient in banking infrastructure.

The total deposit with these bank branches available in the district in 1979-80 was Rs.92.10 crore which increased to Rs.163.72 crores during 1980-81. On the other hand, the total loan distributed, which was Rs.12.58 crore in 1979-80, increased to Rs.19.29 crore during the year 1980-81. As a result of the changes in deposits and loan advancement the credit: deposit ratio, which was 29.9 in 1979-80 appreciably increased to 37.6 during 1980-81, as would be evident from the following table:-

Table 8.4 - Progress of Commercial Banks in Allahabad

| Sl.<br>No. | Item  | District              |         |
|------------|---|-----------------------|---------|
|            |   | (`000 Rs.)<br>1980-81 |         |
| 0          | 1   | 2                     | 3       |
| 1.         | Total deposits                                    | 921000                | 1637227 |
| 2.         | Credit deposit ratio                              | 29.9                  | 37.6    |
| 3.         | Total loan distributed                            | 125822                | 192930  |
| 4.         | Share of Primary Sector:                          |                       |         |
|            | (i) Agriculture                                   | 58391                 | 61974   |
|            | (ii) Small Industries                             | 11511                 | 76574   |
|            | (iii) Retail trade )                              |                       |         |
|            | (iv) Road transport )                             | 10631                 | 33181   |
|            | (v) Others )                                      |                       |         |
| 5.         | Percentage of primary sector<br>in total advances | 63.00                 | 88.00   |
| 6.         | Per capita deposit '000                           | 0.313                 | 0.557   |
| 7.         | Per capita advances '000                          | 0.043                 | 0.065   |

SOURCE: Statistical Bulletin-Allahabad: Office of the District Economics and Statistics Officer, Allahabad, U.P.

in total

Moreover, the share of primary sector advances of these bank branches in the district in 1979-80 was 63 per cent which considerably increased to 88 per cent during the year 1980-81. Per capita bank deposit increased from Rs. 313 to Rs. 557 during this period, whereas the per capita advances amounted to Rs. 43 and Rs. 65 respectively.

#### 8.4 Cooperatives

There were 272 primary agricultural cooperative societies in the district in 1982 with total membership of 3,03,675. The number of these societies was the highest in Soraon and the lowest in Sirathu tehsil. The share capital with these societies was Rs. 19389 thousand and working capital Rs.89315 thousand. The total loan advanced was Rs.67039 thousand in which the share of short term loan was 75.27 per cent as against medium term loan (13.52 per cent) and long-term loan (11.21 per cent). The loan advanced by primary agricultural cooperative societies per borrower in the district was Rs.221 which was quite low as compared to Rs.626 per borrower at the state level. Tehsil-wise details of the existing primary agricultural cooperative societies are given in the following table:-

Table 8.5 - Tehsil-wise Primary Agricultural Cooperative Societies in Allahabad in 1982

| Sl. No.  | Tehsils    | Number of Co-operative Societies | Member ship | Share capital '000Rs. | Work ing capital '000Rs. | Total depo sit '000Rs. | Loan distributed in the year ('000 Rs.) |      |      | Villages under | Socie ties |
|----------|------------|----------------------------------|-------------|-----------------------|--------------------------|------------------------|---|------|------|----------------|------------|
|          |            |                                  |             |                       |                          |                        | 1                                       | 2    | 3    |                |            |
| 1.       | Handia     | 42                               | 46612       | 3194                  | 13798                    | 366                    | 8263                                    | 960  | 1015 | 601            |            |
| 2.       | Phoolpur   | 42                               | 41436       | 2413                  | 12803                    | 984                    | 7592                                    | 1144 | 670  | 502            |            |
| 3.       | Soraon     | 43                               | 40519       | 2480                  | 14823                    | 329                    | 10244                                   | 775  | 995  | 415            |            |
| 4.       | Chayal     | 34                               | 31671       | 1967                  | 9290                     | 205                    | 4595                                    | 1703 | 820  | 309            |            |
| 5.       | Manjhanpur | 24                               | 26125       | 1462                  | 7851                     | 244                    | 3700                                    | 1515 | 930  | 269            |            |
| 6.       | Sirathu    | 17                               | 25348       | 1594                  | 6096                     | 205                    | 3503                                    | 159  | 635  | 250            |            |
| 7.       | Karchhana  | 34                               | 47536       | 3235                  | 11911                    | 354                    | 5624                                    | 1435 | 1263 | 582            |            |
| 8.       | Meja       | 36                               | 44428       | 3044                  | 12743                    | 200                    | 6936                                    | 1373 | 1190 | 603            |            |
| District |            | 272                              | 303675      | 19389                 | 89315                    | 2887                   | 50457                                   | 9064 | 7518 | 3531           |            |

SOURCE: Statistical Bulletin-Allahabad. Office of the District Economics and Statistics Officer, Allahabad, U.P.

Allahabad had 37 district cooperative banks in 1981-82. The total loans advanced by these banks increased from Rs.843 thousand in 1979-80 to Rs.1291 thousand in 1981-82. Moreover, the nine land development banks, which existed in the district in 1979-80, showed no change in their strength till 1982. The loan advanced by these banks

decreased from Rs. 16317 thousand in 1979-80 to Rs. 7518 thousand in 1981-82. The number of non-agricultural cooperative societies in the district in 1979-80 was 47 which increased to 48 during the year 1981-82. The share capital and working capital of these societies, which were respectively Rs. 983 thousand and Rs. 2816 thousand in 1979-80, increased to Rs. 991 thousand and Rs. 3247 thousand during the year 1981-82, as would be evident from the following table :-

Table 8.6 - Cooperative Banks and Primary Non-Agricultural Cooperative Societies in Allahabad District

| Sl.<br>No.  | Particulars                        | 1979-80 | 1980-81 | 1981-82 |   |
|---|------------------------------------|---------|---------|---------|---|
|   |                                    | 0       | 1       | 2       | 3 |
| <b>1. District Cooperative Banks:</b>                     |                                    |         |         |         |   |
|   | 1(a) Branches                      | 37      | 37      | 37      |   |
|   | (b) Membership                     | 371     | 372     | 378     |   |
|   | (c) Loan distributed<br>(`000 Rs.) | 843     | 1026    | 1291    |   |
|   | (i) Short term                     | 414     | 524     | 724     |   |
|   | (ii) Medium Term                   | 429     | 502     | 567     |   |
| <b>2. Land Development Bank:</b>                          |                                    |         |         |         |   |
|   | (a) Branches                       | 9       | 9       | 9       |   |
|   | (b) Loan distributed<br>(`000 Rs.) | 16317   | 9788    | 7518    |   |
| <b>3. Primary Non-Agricultural Cooperative Societies:</b> |                                    |         |         |         |   |
|   | (a) Branches                       | 47      | 48      | 48      |   |
|   | (b) Membership                     | 1616    | 1616    | 1616    |   |
|   | (c) Share capital<br>(`000 Rs.)    | 983     | 991     | 991     |   |
|   | (d) Working capital<br>(`000 Rs.)  | 2815.98 | 3246.80 | 3246.80 |   |
|   | (e) Loan distributed<br>(`000 Rs.) | -       | 16      | -       |   |

SOURCE: Statistical Bulletin-Allahabad. Office of the District Economics and Statistics Officer, Allahabad, U.P.

As shown above, the other cooperative societies, which are very few in the district, are located in Soraon, Chayal and Karchhana tehsils only.

#### 8.5 Education

The changes in educational institutions, which have taken place in Allahabad during the period 1973-81, are shown in the following table:-

Table 8.7-Educational Institutions in Allahabad

| SI.<br>No. | Schools                  | 1973-74 | 1981 | Percentage growth |
|------------|--------------------------|---------|------|-------------------|
|            |                          | 0       | 1    | 2                 |
| 1.         | Junior basic schools     | 1528    | 1766 | 15.58             |
| 2.         | Senior basic schools     | 261     | 360  | 37.93             |
| 3.         | Higher Secondary schools | 163     | 206  | 26.38             |
| 4.         | Degree Colleges          | 10      | 20   | 100.00            |

SOURCE: Statistical Bulletin-Allahabad. Office of the District Economics and Statistics Officer, Allahabad, U.P.

The number of Junior Basic Schools increased from 1528 in 1973-74 to 1766 during 1980-81, showing the growth of 15.58 per cent. The increase in Senior Basic Schools and Higher Secondary Schools was from 261 to 360 and from 163 to 206 respectively. Moreover, the degree colleges,

which were ten in 1973-74 increased to twenty during the year 1980-81. The number of Junior Basic Schools, Senior Basic Schools and Higher Secondary Schools per lakh of population in the district during 1980-81 was 46.72, 9.52 and 5.45 respectively, whereas the corresponding figures at the state level worked out to 63.93, 12.09 and 4.70.

Following the distance criterion we find that the number of villages within the radius of 3 Km. from Junior Basic Schools in the district in 1980-81 was 77.09 which varied from 73.21 per cent in Handia to 79.38 per cent in Karchhana tehsil. The corresponding percentages in respect of Senior Basic Schools (Boys) varied from 27.88 in Manjhanpur to 46.81 in Phoolpur tehsil, whereas these figures in respect of Senior Basic Schools (Girls) were 7.49 in Handia and 24.10 in Phoolpur respectively. Moreover, the percentage of villages falling within the radius of 3 Km. from Higher Secondary Schools (Boys) in the district was 24.92, which showed variations from 19.33 in Manjhanpur to 30.68 in Phoolpur. The corresponding percentage variations in respect of Higher Secondary Schools (Girls) were found to be between 'nil' in Manjhanpur and 14.34 in Phoolpur, as shown in the following table:-

Table 8.8 - Classification of Villages According to  
Their Distance from Educational  
Institutions in Allahabad.

| Sl.<br>No. | Tehsils    | Villages Within the Radius of 3 Km. from |                            |                |                |                                |  |
|------------|------------|--|----------------------------|----------------|----------------|--------------------------------|--|
|            |            | Junior<br>Basic<br>Schools               | Senior<br>Basic<br>Schools | Boys           | Girls          | Higher<br>Secondary<br>Schools |  |
| 0          | 1          | 2  | 3                          | 4              | 5              | 6                              |  |
| 1.         | Handia     | 440<br>(73.21)                           | 238<br>(39.60)             | 45<br>(7.49)   | 152<br>(25.29) | 1<br>(0.17)                    |  |
| 2.         | Phoolpur   | 377<br>(75.10)                           | 235<br>(46.81)             | 121<br>(24.10) | 154<br>(30.68) | 72<br>(14.34)                  |  |
| 3.         | Soraon     | 317<br>(76.39)                           | 144<br>(34.70)             | 70<br>(16.87)  | 106<br>(25.54) | 3<br>(0.72)                    |  |
| 4.         | Chayal     | 243<br>(78.64)                           | 127<br>(41.10)             | 66<br>(21.36)  | 84<br>(27.18)  | 11<br>(3.56)                   |  |
| 5.         | Manjhanpur | 212<br>(78.81)                           | 75<br>(27.88)              | 33<br>(12.27)  | 52<br>(19.33)  | -<br>-                         |  |
| 6.         | Sirathu    | 198<br>(79.20)                           | 94<br>(37.60)              | 39<br>(15.60)  | 39<br>(15.60)  | 18<br>(7.20)                   |  |
| 7.         | Karchhana  | 462<br>(79.38)                           | 176<br>(30.24)             | 80<br>(13.75)  | 140<br>(24.05) | 49<br>(8.42)                   |  |
| 8.         | Meja       | 473<br>(78.44)                           | 202<br>(33.50)             | 100<br>(16.58) | 153<br>(25.37) | 25<br>(4.15)                   |  |
| District   |            | 2722<br>(77.09)                          | 1291<br>(36.56)            | 554<br>(15.69) | 880<br>(24.92) | 179<br>(5.07)                  |  |

NOTE : Figures given in parentheses denote percentages to totals.

SOURCE: Statistical Bulletin-Allahabad. Office of the District Economics and Statistics Officer, Allahabad, U.P.

A general remark based on the above factual information is that percentage variations in the availability of various educational institutions go on increasing as we move from Junior Basic Schools to Higher Secondary Schools.

#### 8.6 Medical and Health Institutions

The details of the medical and health institutions available in the district at the end of 1973-74 and 1981-82 are given below:-

Table 8.9 - Medical Institutions in Allahabad District

| S1.<br>No. | Medical Institutions                             | 1973-74 | 1981-82 | Percentage<br>Variation |
|------------|--|---------|---------|-------------------------|
| 0          | 1  | 2       | 3       | 4                       |
| 1.         | Allopathic Hospitals/<br>Dispensary              | 77      | 88      | 14.29                   |
| 2.         | Ayurvedic Hospitals                              | 26      | 33      | 26.92                   |
| 3.         | Unani  | 4       | 7       | 75.00                   |
| 4.         | Homoeopathic                                     | 4       | 20      | 400.00                  |
| 5.         | Primary Health Centre                            | 28      | 29      | 3.57                    |
| 6.         | Maternity-cum-Child<br>Welfare Centre/Sub-Centre | 112     | 118     | 5.36                    |

SOURCE: Statistical Bulletin-Allahabad. Office  
of the District Economics and Statistics  
Officer, Allahabad, U.P.

According to the above table, the increase in number of Homoeopathic Hospitals was the highest from 4 in 1973-74 to 20 during 1981-82, whereas the corresponding increase in case of Primary Health Centres was the lowest from 28 to 29 during this period. The number of Allopathic hospitals/Dispensaries per lakh of population in the district during 1981-82 was 2.33 whereas the corresponding figure at the state level worked out to 2.94.

Moreover, the percentage of villages falling within the radius of 3 Km. from Allopathic hospitals in the district during 1981-82 was 14.16, whereas the corresponding percentage was the highest (25.89) in Chayal and the lowest (6.40) in Sirathu. These variations in respect of family welfare centres ranged from 8.79 per cent in Meja to 38.80 per cent in Sirathu tehsil as would be evident from the following table:-

Thus, the inter-tehsil variations in availability of different types of medical and health institutions suggest that some tehsils are better served with these facilities and some others experience their deficiencies but these facilities are generally lacking in whole of the district.

Table 8.10 - The Distance of Villages from Allopathic,  
Ayurvedic, Unani Hospitals and Family  
Welfare Centres

| Sl.<br>No. | Tehsils/District | Villages Within the Radius of 3 km. from |               |                   |                                      |                             |                   |
|------------|------------------|--|---------------|-------------------|--------------------------------------|-----------------------------|-------------------|
|            |                  | Allopathic<br>Hospitals                  | Aurve-<br>dic | Unani<br>Hospital | Family<br>Welfare<br>Hospita-<br>tal | Primary<br>Health<br>Centre | Welfare<br>Centre |
| 0          | 1                | 2  | 3             | 4                 | 5                                    | 6                           |                   |
| 1.         | Handia           | 108<br>(17.97)                           | 64<br>(10.65) | -                 | 64<br>(10.65)                        | 64                          | 64                |
| 2.         | Phoolpur         | 39<br>(7.77)                             | 5<br>(0.99)   | 11<br>(2.19)      | 53<br>(10.56)                        | 53                          | 53                |
| 3.         | Soraon           | 88<br>(21.20)                            | 14<br>(3.37)  | 6<br>(1.45)       | 74<br>(17.83)                        | 74                          | 74                |
| 4.         | Chayal           | 80<br>(25.89)                            | 28<br>(9.06)  | 23<br>(7.44)      | 51<br>(16.50)                        | 51                          | 51                |
| 5.         | Manjhampur       | 28<br>(10.41)                            | 8<br>(2.97)   | -<br>(-)          | 35<br>(13.01)                        | 35                          | 35                |
| 6.         | Sirathu          | 16<br>(6.40)                             | 24<br>(9.60)  | 6<br>(2.40)       | 97<br>(38.80)                        | 97                          | 97                |
| 7.         | Karchhana        | 57<br>(9.79)                             | 86<br>(14.78) | 17<br>(2.92)      | 54<br>(9.28)                         | 54                          | 54                |
| 8.         | Meja             | 84<br>(13.93)                            | 28<br>(4.64)  | 3<br>(0.50)       | 53<br>(8.79)                         | 53                          | 53                |
| District   |                  | 500<br>(14.16)                           | 257<br>(7.27) | 66<br>(1.87)      | 481<br>(13.62)                       | 481<br>(13.62)              |                   |

NOTE : Figures given in parentheses denote percentages to totals.

SOURCE : Statistical Bulletin - Allahabad. Office of the District Economics and Statistics Officer, Allahabad, U.P.

### 8.7 Drinking Water

About 40.50 per cent of the total villages in the district are provided with drinking water facilities through pipe lines and the population covered under this facility is approximately 27.8 per cent of the total population. The supply of drinking water through pipe lines is spread across the tehsils except Manjhanpur, as would be evident from the following table:-

Table 8.11 - Tehsilwise Drinking Water Facilities  
in Allahabad District in 1982

| Sl.<br>No. | Tehsils/District | Supply of Water<br>through Pipelines |                                   | Villages<br>having<br>Drinking<br>Water | No. of<br>Scarcity<br>Villages |
|------------|------------------|--------------------------------------|-----------------------------------|---|--------------------------------|
|            |                  | No. of<br>Villages<br>Benefited      | No. of<br>Population<br>Benefited |   |                                |
| 0          | 1                | 2                                    | 3                                 | 4                                       | 5                              |
| 1.         | Handia           | 355                                  | 225986                            | 572                                     | 28                             |
| 2.         | Phoolpur         | 262                                  | 245301                            | 502                                     | 2                              |
| 3.         | Soraon           | 105                                  | 79832                             | 415                                     | -                              |
| 4.         | Chayal           | 74                                   | 100051                            | 309                                     | -                              |
| 5.         | Manjhanpur       | -                                    | -                                 | 269                                     | -                              |
| 6.         | Sirathu          | 25                                   | 34196                             | 250                                     | -                              |
| 7.         | Karchhana        | 251                                  | 148358                            | 582                                     | -                              |
| 8.         | Meja             | 371                                  | 212971                            | 600                                     | 2                              |
|            | District         | 1423                                 | 1046695                           | 3499                                    | 32                             |

SOURCE: Statistical Bulletin - Allahabad. Office of the District Economics and Statistics Officer, Allahabad, U.P.

Moreover, the villages having drinking water facility within the village are 99.09 per cent of the total villages in the district. However, there are, in all, 32 villages which experience inadequacy of drinking water facility. These villages are concentrated mainly in Handia tehsil (28), followed by two in Phoolpur and two in Meja tehsil.

## CHAPTER - IX

### INTER-TEHSIL VARIATIONS IN LEVEL OF DEVELOPMENT

As stated in the first chapter, the district of Allahabad is divided into three parts (Trans-Ganga, Doab and Trans Yamuna) following the criterion of topographical and physical conditions. Moreover, the analysis of areal differences in sectoral development in subsequent chapters points out that the level of development differs from one tehsil to another. But it does not indicate anything regarding the position of overall development of individual tehsils. Inter-tehsil variations in levels of overall development are, therefore, attempted here. This would require choice of indicators of development of key sectors of the economy and then working out composite index of development based on the selected indicators.

The indicators selected for this purpose are listed below:

- (1) Intensity of cropping.
- (2) Percentage of net irrigated area to net area sown.
- (3) Percentage of area under commercial crops to Gross Cropped Area.
- (4) Number of registered/un-registered industrial units per '00 sq.km. area.
- (5) Percentage of villages within the radius of 3 km. from pucca road.
- (6) Percentage of villages electrified to total number of villages.
- (7) Bank Offices per lakh of population.
- (8) Veterinary hospitals per lakh of livestock population.
- (9) Allopathic hospitals/dispensaries per lakh of population.
- (10) Villages within the radius of 3 km. from Senior Basic Schools.

With a view to working out the composite index of development, first of all, new indices for different tehsils in respect of the values of above indicators have been prepared by assuming the average value of the district in respect of each indicator as 100. Subsequently, the composite index of development for each tehsil has been worked out by calculating the mean value of new indices. The tehsil-wise values of the selected indicators and the composite indices are shown in the table No. 9.1.

It is, however, to be mentioned here that although this technique of constructing composite indices does not seem to be technically sound enough because of assigning equal weights to each indicator, it does provide at least some rough estimates of levels of overall development for different tehsils which can be further used for the purposes of comparative analysis. An examination of the above table suggests that all the eight tehsils (consisting of 28 blocks) of the Allahabad district can be divided into three clear cut groups (High, Medium and Low) according to the values of the composite indices of different tehsils, showing their levels of development.

Table 9.1 - Value of the Selected Indicators and Composite Indices  
of Development

| Sl. No.  | Indicators    | Handia         | Phoolpur      | Soraon Chayal | Manjhana-Sirathuna | Karchha-na    | Meja          | District     |                |                |
|--|---------------|----------------|---------------|---------------|--------------------|---------------|---------------|--------------|----------------|----------------|
| 0  | 1             | 2              | 3             | 4             | 5                  | 6             | 7             | 8            | 9              | 10             |
| 1. Intensity of Cropping   |               | 139 (100.00)   | 175 (125.90)  | 162 (116.55)  | 128 (92.09)        | 127 (91.37)   | 128 (92.09)   | 132 (94.96)  | 137 (98.56)    | 139 (100.00)   |
| 2. Percentage of Net Irrigated Area to M.L.S.                                |               | 57.40 (134.00) | 61.72 (144.1) | 71.91 (167.9) | 33.08 (77.2)       | 35.60 (85.5)  | 40.01 (93.4)  | 29.35 (68.5) | 36.45 (85.1)   | 42.83 (100.00) |
| 3. Percentage of Area under Commercial Crops                                 |               | 2.76 (114.5)   | 2.74 (113.7)  | 7.47 (310.0)  | 1.48 (61.4)        | 2.18 (90.5)   | 2.38 (98.8)   | 1.21 (50.2)  | 0.08 (3.3)     | 2.41 (100.00)  |
| 4. Number of registered/ unregistered industrial units per '00 sq. km. Area. |               | 193.5 (85.3)   | 36.7 (63.5)   | 27.3 (40.5)   | 17.4 (76.5)        | 32.9 (74.7)   | 32.1 (40.0)   | 17.2 (31.4)  | 13.5 (43.0)    | 43.0 (100.00)  |
| 5. Percentage of villages within the radius of 3 km. from pucca roads.       |               | 57.90 (103.3)  | 61.35 (104.3) | 61.93 (100.8) | 59.87 (102.7)      | 60.97 (105.1) | 62.40 (101.3) | 60.14 (91.9) | 54.56 (91.9)   | 59.39 (100.00) |
| 6. Percentage of Villages Electrified to total number of villages            | 86.52 (133.5) | 76.89 (135.2)  | 77.83 (95.6)  | 55.02 (75.5)  | 43.49 (81.3)       | 46.80 (62.7)  | 36.03 (48.3)  | 28.19 (48.3) | 57.58 (100.00) |                |
| 7. Bank offices per lakh of population                                       | 4 (56.0)      | 5 (70.0)       | 6.9 (96.6)    | 3.8 (53.2)    | 3.9 (54.6)         | 3.8 (53.2)    | 5.6 (78.4)    | 5.5 (78.4)   | 5.5 (77.0)     | 7.14 (100.00)  |
| 8. Veterinary hospitals per lakh of population                               | 2.4 (96.0)    | 3.2 (128.0)    | 2.5 (100.0)   | 3.4 (135.0)   | 1.8 (72.0)         | 2.2 (88.0)    | 2.5 (100.0)   | 2.1 (84.0)   | 2.1 (100.0)    | 2.5 (100.00)   |

CONTD. ..../-

| Sl. No.  | Indicators   | Handia           | Phoolpur         | Soraon           | Chayal           | Manjhan-pur      | Sirathu          | Karchha-na       | Meja             | District          |
|--|--|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|
| 0  | 1  | 2                | 3                | 4                | 5                | 6                | 7                | 8                | 9                | 10                |
| 9.   | Allopathic hospitals/ dispensaries per 100000 lekh of population | 1.25<br>(28.7)   | 2.50<br>(41.7)   | 2.41<br>(83.3)   | 1.74<br>(80.3)   | 47<br>(58.0)     | 2.25<br>(15.7)   | 3.49<br>(75.0)   | 3.00<br>(116.3)  | 3.00<br>(100.00)  |
| 10.  | Villages within the radius of 3 km. from Senior Basic Schools    | 47.09<br>(59.42) | 70.91<br>(89.48) | 51.57<br>(65.07) | 62.46<br>(78.81) | 40.15<br>(50.66) | 53.20<br>(67.13) | 44.00<br>(55.52) | 50.08<br>(63.19) | 79.25<br>(100.00) |
| Total  | Value of Indicators  | 1286.42          | 1034.98          | 1242.42          | 815.90           | 757.33           | 769.42           | 726.58           | 699.65           | 1000              |
| Average Value of Indicators(Composite Indices) |  |                  |                  |                  |                  |                  |                  |                  |                  |                   |
|  |  | (128.6)          | (103.5)          | (124.2)          | (81.6)           | (75.7)           | (76.9)           | (72.7)           | (70.0)           | (100.0)           |

The details of these groups alongwith the levels of development of different tehsils and blocks are given below:-

Table 9.2 - Tehsil-wise Level of Overall Development

| Sl.<br>No.        | Level of development/<br>values of composite<br>indices | Tehsils          | Blocks  |   |   |
|-------------------|---|------------------|---|---|---|
|                   |   |                  | 0   | 1 | 2 |
| <b>I. High</b>    |   |                  |   |   |   |
|                   | (100 & Above)   | Handia           | (i) Dhannupur<br>(ii) Handia<br>(iii) Pratappur<br>(iv) Saidabad                  |   |   |
|                   |   | Phoolpur         | (i) Bahadurpur<br>(ii) Baharia<br>(iii) Phoolpur                                  |   |   |
|                   |   | Soraon           | (i) Holagarh<br>(ii) Kaudihar<br>(iii) Mauaima<br>(iv) Soraon                     |   |   |
| <b>II. Medium</b> |   |                  |   |   |   |
|                   | (75 to <u>100</u> )                                     | Chayal           | (i) Chayal<br>(ii) Newada<br>(iii) Mooratganj                                     |   |   |
|                   |   | Manjhans-<br>pur | (i) Kanaili<br>(ii) Manjhanspur<br>(iii) Sarsawan                                 |   |   |
|                   |   | Sirathu          | (i) Kada<br>(ii) Sirathu  |   |   |
| <b>III. Low</b>   |   |                  |   |   |   |
|                   | ( Below 75 )  | Karchhana        | (i) Chaka<br>(ii) Karchhana<br>(iii) Kaundhiyara<br>(iv) Jasra<br>(v) Shankargarh |   |   |
|                   |   | Meja             | (i) Kuraon<br>(ii) Manda<br>(iii) Meja<br>(iv) Uruwa                              |   |   |

As shown above, there seems to be wide variations in level of overall development of different tehsils. The tehsils of Handia, Phoolpur and Soraon, which constitute the Trans Ganga region of the district and are contiguous, occupy place in the category of high level of development. Although these three tehsils fall in one and the same category of development, Phoolpur and Handia are better advanced in industrial sector. Development of infrastructure is relatively at high level in all the three tehsils of this category. Cropping intensity is comparatively high in both Phoolpur and Soraon tehsils. Agricultural advancement and the development of non-agricultural sector in Handia tehsil is fairly commensurate with the district level. Moreover, the three tehsils of Chayal, Manjhanpur and Sirathu, which constitute Doab region of the district, have attained medium level of development. Infrastructural facilities required for development of allied agricultural activities and agricultural marketing are found to be satisfactory in these tehsils. Cropping intensity and irrigation coverage of these tehsils are closer to the district level average. Industrial activities are at low pace and industrial development is lagging behind the district. The remaining two tehsils of Karchhana and Meja, which primarily constitute Trans Yamuna region of the district, are found to be at low level of development. Low level of irrigation, lower proportion of area under commercial crops, low level of industrial activities and low pace of village electrification are the major characteristics of these tehsils.

## CHAPTER - X

### SUMMARY AND CONCLUSION

Allahabad with an area of 7261 Sq. Km. is one of the five drought prone districts of Uttar Pradesh. The district is divided into three main natural regions namely, trans Ganga tract consisting of Handia, Phoolpur and Soraon tehsils; the Doab forming the area of Sirathu, Manjhanpur and Chayal; and the trans Yamuna tract consisting of Karchhana and Meja tehsils. The soils available in the district consist of clay, loam, sandy loam and black cotton. The clay, which is fit for the cultivation of rice, is generally found in depressions. The loam known as Dumat, a mixture of sand and clay, is usually rich and dark soil. The rest two soils of sandy loam and black cotton are of inferior quality. About 63 per cent of the total reporting area of the district during 1980-81 was under cultivation. The forest covered 2.73 per cent of it and proportion of culturable waste and fallow land was approximately 16 per cent.

The district is characterised with large variations in temperature ranging from  $8^{\circ}\text{C}$  -  $26^{\circ}\text{C}$  in winter to  $16^{\circ}\text{C}$  -  $42^{\circ}\text{C}$  in summer. The rainfall is erratic in nature and is also not enough to sustain agriculture. The major rivers of the district are Ganga, Yamuna, Tons, Belan and several minor streams. Most of these rivers are seasonal in character because of inadequate and erratic rainfall. Both the surface and ground water resources are available

in the district. According to an estimate, the utilisable surface water in 1980-81 was 1442.64 MCM and the area irrigated through this source was 82,237 hectares constituting 41.19 per cent of the total irrigated area of the district. On the other hand, ground water resources were of the order of 665.42 MCM, of which 51.79 per cent was utilised for irrigation purposes up to 1980-81. It is clear from the foregoing information, that the district has a sizeable potentialities of surface and ground water resources. The mineral products that are commonly found in the district are glass sand, building stone, kankar, brick earth and Reh. Allahabad is one of the most potential districts of the state in livestock wealth. However, the growth of the total livestock population in the district is found to be lower as compared to the state. Not only this, the density of livestock population in the district is also comparatively low.

According to 1981 Census, the total population of the district is 37.80 lakh, giving decennial growth of 28.71 per cent as against 25.33 per cent in the region and 25.52 per cent in the state. A higher pace of economic activities owing to better effectiveness of industrialisation programme seems to have influenced the growth of population in the district during the previous decade. The rural population constitutes 79.64 per cent of the total population in the district as against 89.34 per cent in

the region and 81.99 per cent in the state. Although the proportion of urban population is lower in the district, its growth is found to be relatively faster. The district is densely populated as compared to the region and the state. The density of population in the district according to 1981 Census is 521 as against 484 in the region and 377 in the state. The proportion of scheduled caste and scheduled tribes population in the district is 24.53 per cent which is significantly higher than the state (21.36) per cent). The literacy accounts for 28.61 per cent of the total population in the district as compared to the corresponding percentages of 24.61 in the Eastern region and 27.40 in the state.

The workforce constitutes 29. **24** per cent of the total population in the district as against 29.13 per cent in the state. The proportion of rural main workers to total population is 30. **15**, whereas the corresponding proportion of urban main workers comes to 25. **65** per cent. The participation of male in the total work-force is 85.56 per cent and the female proportion accounts for 14.44 per cent only. The percentage of total workforce engaged in agriculture in the district is 70.39 per cent as against 74.33 per cent in the state. Although the proportion of cultivators increased during the previous decade, there was a decline in the proportion of agricultural

labourers which might be because of distribution of surplus land among the landless agricultural labourers. Besides, the workforce employed in household industry and 'others' sector showed an increasing trend during the previous decade. There was a decline in proportion of rural workforce with simultaneous increase in proportion of urban workforce during 1971--81. The growth of urban population in the district during 1971--81 was 41.65 per cent as against 25.41 per cent in the region and 61.22 per cent in the state. The slow growth of urbanisation in the district during this period might be because of the higher base of urban population in 1970-71.

Owing to erratic nature of rainfall and relatively low availability and utilisation of ground and surface water resources, the district is prone to drought. Allahabad was declared drought affected district in the years 1954-55, 57-58, 61-62 during the Pre-Green Revolution period and 65-66, 66-67, 67-68, 68-69, 69-70, 71-72, 72-73, 73-74, 74-75, 76-77 and 1979-80 during the Post-Green Revolution period. Of the 14 declared drought years, only 8 years in both foodgrains and sugarcane and 11 years in potato experienced loss in cultivated area. Moreover, the loss of production in respect of foodgrains sugarcane and potato was experienced in 3 years, 7 years and 12 years respectively, whereas the number of years experiencing loss of productivity was 7 in foodgrains, 8 in sugarcane and 12 in potato, the

The nature of drought is found to be the most severe in the year 1968-69 followed by 1966-67, 1957-58 and 1974-75.

The frequency of drought in terms of number of declared drought years was much less (3 years) in the Pre-Green Revolution period (1951--65), as compared to the period of Green Revolution onwards (1965--81) during which the frequency of declared drought years was as high as 11 years. With the result the loss in agriculture is found to be of lower order in the former periods as compared to the latter one. It appears that adoption of seed-fertilizer-irrigation technology during the latter period has not proved to be effective in minimising the adverse effect of drought on agriculture in the district. The possible reason is that inspite of appreciable increase in major and minor irrigation sources, the utilisation of irrigation potential created in the district is quite low, resulting in slow progress of irrigation coverage and restraining larger use of other agricultural inputs.

Allahabad is rated to be one of the developed districts of the state. In its support, we find that per capita net domestic product in the district in 1980-81 was Rs.669.0 as compared to Rs.598.0 in the state. A higher level of development seems to be associated with higher annual growth rate of total net domestic product resulting from higher annual growth of output in manufacturing

sector separately for the registered and unregistered industrial units in the district during 1970--81 were 12.5 and 11.6 per cent respectively, whereas the corresponding percentages at the regional and state levels stood at .9 per cent, 2.7 per cent and 3.5 per cent, 2.7 per cent only.

Turing to the aspect of employment, we find that share of workers engaged in agriculture (as cultivators and agricultural labourers) to total workers in the district decreased from 72.92 per cent in 1970-71 to 70.39 per cent during 1980-81 as against the corresponding percentages of 76.91 and 74.71 at the state level. Consequently, the share of workers engaged in non-agricultural sector to total workers in the district increased from 27.08 per cent in 1970-71 to 29.61 per cent during 1980-81, whereas the corresponding percentages worked out to respectively 28.09 and 25.29 at the state level. These sectoral contributions both in terms income and employment suggest that diversification of economy, which took place in the district during the previous decade, was comparatively of the higher order.

Although the contribution of primary sector to total net domestic product decreased during the previous decade, it is still substantial. Besides, about 70 per cent of the total workforce is engaged in agriculture.

and majority of the population depends upon it for their livelihood. Hence, agriculture has to play a crucial role in development of the district. The average size of land holdings in the district decreased from 1.14 ha. in 1970-71 to 0.97 ha. during 1976-77, whereas the corresponding decline at the state level was from 1.16 ha. to 1.05 ha. We notice an increase in the operated holdings during the period 1970-77 but total area under these holdings showed a marginal decline. The increase in number of holdings might have resulted because of the distribution of surplus land among the landless agricultural labourers and sub-division and fragmentation of land holdings, whereas the speedier process of urbanisation might be the cause of fall in the area of total operated holdings.

There was a marginal increase in culturable waste and fallow land from 14.94 per cent in 1970-71 to 15.79 per cent during 1980-81 with a simultaneous decline in proportion of net area sown from 64.91 per cent to 62.94 per cent. There exists a significant inter-tehsil variation in percentage of net area sown, the lowest (56.51 per cent) being in Meja and the highest (71.07 per cent) in Chayal tehsil which might be because of the differences in topographical conditions.

Paddy and wheat are the major crops of the district. The percentage of area under foodgrain crops to gross cropped area in the district during 1980-81 was as high as 92.81.

whereas the corresponding percentage of the area under commercial crops was hardly 2.41 per cent with maximum (7.47 per cent) in Soraon tehsil and minimum (0.84 per cent) in Meja tehsil. Moreover, proportion of area under total pulses slided down to some extent during this period, but its contribution to gross cropped area is still substantial with the highest ( 25.12 per cent) in Chayal and the lowest (8.14 per cent) in Soraon tehsil. The percentage of area covered under different crops in Kharif season went down in the district from 49.09 per cent in 1973-74 to 47.30 per cent during 1980-81. But the corresponding percentage in Rabi season during this period increased from 39.89 per cent to 45.51 per cent.

Although the cultivated area per agricultural worker in the district is relatively low, the yield per ha. of important crops is found to be comparatively high because of the better application of improved agricultural practices in terms of higher doses of fertilizers and pesticides, besides higher irrigation coverage. Consequently, the district, which had experienced deficit of foodgrains in 1973-74, achieved self-sufficiency in it during 1980-81 and the availability of foodgrains exceeded the requirement.

The percentage of area covered under high yielding variety of paddy in the district during 1979-80 was 38.24 as against 47.78 per cent in the region and 43.25 per cent in the state. Whereas the corresponding percentages

were highest (61.95) in Soraon tehsil and the lowest (6.64) in Sirathu tehsil. On the other hand, in case of high yielding variety of wheat the corresponding coverage in the district was 64.86 per cent, as against 68.06 per cent in the region and 68.93 per cent in the state. This coverage was the highest (76.54) in Soraon tehsil and the lowest (56.59) in Karchhana tehsil. Thus, the district is found to be much advanced in the coverage of area under high yielding varieties.

The consumption of fertilizer in the district is comparatively low. Its use per ha. of cropped area in the district in 1980-81 was 43.30 Kg., with maximum (84.11 Kg.) in Chayal and minimum (20.48 Kg.) in Maja tehsil. The corresponding figures were 49.61 Kg. in the Eastern region and 47.35 Kg. in the state.

The sources of irrigation available in the district consist of both major and minor. The total length of canal, which was 1699 Km. in 1976-77, increased to 2294 Km. during 1981-82, showing the growth rate of 35.02 per cent. Besides, there were, in all, 582 state tube-wells, 11,168 private tube-wells, 2248 pumping sets, 35,183 masonry wells, 357 persian wheels and 5200 bandhies in the district in 1975-76 which stood at 841, 17937, 4328, 21657, 183 and 4360 respectively during 1981-82. As a result of these changes, the total irrigation potential created

in the District, which was 3.30 lakh ha. in 1975-76, increased to 3.98 lakh ha. during 1981-82, showing the growth rate of 20.61 per cent. Canals are largely concentrated in Meja, Karchhana, Panjhanpur, Sirathu and Soraon tehsils, whereas state tubewells are mainly found in Hnadia, Phoolpur, Chayal and Karchhana tehsils. Concentration of private tubewells is the highest in Soraon tehsil and the lowest in Meja tehsil. The number of masonry wells showed an appreciable increase during the period, but in case of those fitted with persian wheels, almost all the tehsils of the district experienced the negative growth.

Moreover, the utilisation of irrigation potential created during the period 1975--81 increased from about 1.53 lakh ha. to about 2.0 lakh ha., showing the growth of 30.72 per cent. But the utilisation percentage of available irrigation potential increased from 46.17 in 1975-76 to 50.13 during 1980-81. This utilisation percentage in case of major irrigation works increased from 35.68 in 1975-76 to 52.80 per cent during 1980-81, whereas in case of minor irrigation works, the corresponding utilisation percentage decreased from 53.49 to 48.63 per cent during this period.

In sum, there was an increase in both the irrigation potential as well as its utilisation during the period 1975--81. With the result, the percentage of net

irrigated area to net area sown increased from 29.01 in 1973-74 to 43 per cent during 1980-81, whereas the corresponding increase in percentage of gross irrigated area to gross cropped area was from 26.30 in 1973-74 to 37.39 during 1980-81. However, efforts should be made to achieve maximum possible utilisation of the existing irrigation potential with a view to augmenting the level of irrigation coverage. Moreover, in view of the availability of sufficient quantity of ground water resources, there seems to be still a wide scope for development of additional minor irrigation works at suitable locations in the district.

The total livestock population of the district decreased from 18.55 lakh in 1972 to 18.28 lakh during 1978, showing the negative growth of 1.46 per cent as against 6.39 per cent positive growth rate of livestock population in the state during this period. Inspite of these two opposing tendencies, livestock population per ha. of geographical area went down at both levels. The proportion of breedable population also slided down to some extent in both the cases. Proportionately, the strength of sheep and goat in the district is much higher as compared to the state, obviously because of the availability of better grazing facilities, besides suitable climatic conditions. During the period 1972-78, the strength of poultry birds reduced in the district but showed a considerable increase at the state level.

With a view to providing proper health cover to the total livestock population. There has been appreciable increase in different kinds of veterinary institutions in the district during seventies. But the existing strength of these institutions still fall short off the norms prescribed under Intensive Cattle Development Project (5000 milch animals per veterinary hospital and 1000 milch animals per stockman-centre). Manjhanpur and Soraon seem to be the most deficient tehsils in respect of veterinary institutions.

Out of total water area of 500 ha. under pisciculture, a slightly higher than 60 per cent is concentrated in Meja and the rest is located in Karchhana tehsil.

Allahabad is one of the developed districts from the point of view of industrial development. The contribution of manufacturing sector to total net domestic product in the district during 1980-81 was 28.06 per cent, as against 14.73 per cent in the Eastern region and 16.39 per cent in the State. Also in respect of employment we find that share of workers engaged in non-agricultural sector in the district during 1980-81 was 29.60 per cent, whereas the corresponding shares at the regional and state levels were 21.09 per cent and 25.29 per cent respectively. Hence, the contribution of manufacturing

sector in terms of income and employment is found to be significantly higher in the district.

There were 181 industrial units registered under Factories Act, 1948, with total employment of 23,570 persons and annual production of Rs.13.13 lakh during 1980-81. These units were found to be located mainly in Chayal, Soraon, Karchhana and Phoolpur tehsils. The tehsils of Handia, Manjhanpur, Sirathu and Meja do not have any industrial unit registered under Factories Act, 1948. Moreover, there were industrial units registered with Directorate of Industries, Kanpur. These industries are found to be widely scattered through out the district. Besides, out of the total 1397 handlooms, most of them are reported to be operating under cooperative societies.

The district is found to be well developed in the network of infrastructure also. We notice quite a good progress in road network of the district during the period 1973--81. The length of pucca roads per '000 Sq.Km. of area available in the district during 1980-81 was 453.96 Km., whereas the corresponding length of roads per lakh of population worked out to 86.86 Km. Contrary to this, the length of pucca roads available at the state level was 201 Km. per '000 Sq.Km. of area and 58 Km. per lakh of population. The proportion of villages falling within the radius of 3 Km. from pucca roads in the district was 59.39, whereas the corresponding percentage was found to be the highest (62.40) in Sirathu and the lowest (54.56) in Meja tehsil.

As regards power development, the percentage of villages electrified to the total villages in the district during 1981-82 was 57.56, as compared to 36.10 per cent in 1973-74, whereas the corresponding percentages at the state level increased from 18.41 to 34.31 during this period. Moreover, inter-tehsil analysis reveals that Meja and Karchhana are the most backward tehsils of the district in respect of power development, whereas the tehsils of Hendia, Phoolpur and Soraon are found to be the most forward in this regard. The per capita consumption of electricity in the district is found to be significantly high (150 KWH/hr.) as compared to 87 KWH/hr. in the state.

Regarding the financial institutions, we find that out of the total 207 bank branches, as many as 90 are available in the rural areas. Existing bank branches seem to be inadequate as about 61 per cent of the total villages in the district are still found to be 5 Km. away from the locations of these branches. However, as result of appreciable progress in total deposits and credit advances during 1979--82, the credit - deposit ratio in the district stood at 47.0 per cent against 43.89 per cent in the state.

Out of the total 272 primary agricultural cooperative societies, the highest number was located in Soraon and the lowest in Sirathu tehsil. The loan advanced by these societies per borrower in the district was Rs.221 as compared

to the corresponding amount of Rs. 626 in the state.

Besides, 9 land Development Banks, 48 primary non-agricultural cooperative societies and 37 cooperative banks were also working in the district during 1982.

There were, in all, 1766 junior basic schools, 360 senior basic schools, 206 higher secondary schools and 20 degree colleges in the district during 1980-81. A relatively higher growth in senior basic schools, high schools and degree colleges during seventies appears to be need based because of recently developed craze for higher education among the villagers. An analysis of spatial distribution of existing educational institutions reveals that there exists wide variations in the availability of different types of educational institutions among different tehsils.

This calls for the effective implementation of National Programme of Minimum Needs and follow up of the norms prescribed for creation of educational institutions.

Besides, the facility of technical education available in the district seems to be inadequate in view of the exceeding numbers of enrolment to available seats.

Like education, there has been appreciable increase in medical and health institutions also. There were 88 allopathic hospitals/dispensaries, 33 ayurvedic, 7 Unani, 20 homoeopathic hospitals, 29 primary health centres and 118 maternity-cum-child welfare centres/sub-centres.

The tehsils of Phoolpur, Manjhanpur and Karchhana are lagging behind the district level average in the matter of Allopathic hospitals. A similar kind of inter-tehsil variations is also experienced in case of other hospitals like Ayurvedic and Unani. These facilities seem to be inadequate in the district which is reflected by the low percentage of villages falling within the radius of 3 Km. from the existing medical and health institutions.

The district Allahabad seems to have been better served with drinking water facilities. Only 32 villages out of the total 3531 villages, constituting 0.91 per cent of the total villages, were identified as scarcity villages in the year 1981-82. Of these scarcity villages, 28 were located in Handia tehsil and two in each of the Phoolpur and Meja tehsils.

According to the composite indices of development of different tehsils as attempted in the present case, the tehsils of Handia, Phoolpur and Soraon, which constitute the Trans Ganga tract of the district and are contiguous, occupy place in the category of high level of development. Moreover, three contiguous tehsils of Chayal, Manjhanpur and Sirathu, which constitute Doab of the district, have attained medium level of development. The remaining two tehsils of Karchhana and Meja, which

are also contiguous and form the Trans-Yamuna tract of the district, are found to be at the low level of development. Low level of irrigation facilities, lower proportion of area under commercial crops, low level of industrial activities and low pace of village electrification are some of the major characteristics of these two tehsils.

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Annexure - I

Tehsil-wise Land Use Pattern in the District Allahabad During

1973-74 and 1980-81

(Percentage)

| Sl. No.       | Tehsils | Forest | Culturable waste | Fallow land | Barren and non-Agr uses |       |       |       |       |       |       |       |
|---------------|---------|--------|------------------|-------------|-------------------------|-------|-------|-------|-------|-------|-------|-------|
|               |         |        |                  |             | 73-74                   | 80-81 | 73-74 | 80-81 | 73-74 | 80-81 | 73-74 | 80-81 |
| 0             | 1       | 2      | 3                | 4           | 5                       | 6     | 7     | 8     | 9     | 10    | 11    | 12    |
| 1. Handia     | .01     | -      | 2.98             | 2.00        | 8.80                    | 10.60 | 4.61  | 3.16  | 9.17  | 9.80  | -     | .05   |
| 2. Phoolpur   | -       | -      | 1.16             | 1.50        | 17.07                   | 10.87 | 5.23  | 6.03  | 18.57 | 16.71 | .43   | .59   |
| 3. Soraon     | .04     | .04    | 2.24             | 1.81        | 8.35                    | 9.91  | 6.67  | 7.09  | 9.35  | 10.78 | .46   | .43   |
| 4. Chayal     | -       | -      | 1.87             | 2.54        | 9.07                    | 9.91  | 3.98  | 5.68  | 13.83 | 8.49  | .15   | .18   |
| 5. Manjhanpur | .09     | .09    | 5.22             | 4.25        | 7.90                    | 3.25  | 6.54  | 6.08  | 9.19  | 9.83  | .15   | .21   |
| 6. Sirathu    | .55     | .53    | 7.53             | 5.57        | 5.65                    | 9.76  | 7.98  | 7.87  | 9.50  | 10.62 | -     | .13   |
| 7. Karchhana  | 1.88    | 3.15   | 7.56             | 5.43        | 9.01                    | 13.24 | 4.18  | 4.45  | 9.12  | 10.53 | .08   | .09   |
| 8. Meja       | 7.46    | 9.11   | 11.35            | 5.48        | 7.24                    | 15.30 | 3.83  | 3.29  | 7.13  | 8.99  | -     | .08   |
| District      | 2.14    | 2.75   | 5.98             | 3.95        | 8.96                    | 11.48 | 5.00  | 4.99  | 10.19 | 10.84 | .13   | .18   |

SOURCE: Statistical Bulletin-Allahabad. Office of the District Economics and Statistics Officer, Allahabad, U.P.

| Sl. No.      | Tehsils | Trees and Groves | Net Area Sown |       | Cropping Intensity |       | Irrigation Intensity |       |
|--------------|---------|------------------|---------------|-------|--------------------|-------|----------------------|-------|
|              |         |                  | 73-74         | 80-81 | 73-74              | 80-81 | 73-74                | 80-81 |
| 0            | 1       | 1 $\frac{1}{4}$  | 15            | 16    | 17                 | 18    | 19                   | 20    |
| 1. Handia    |         | 3.93             | 3.93          | 70.50 | 70.46              | 128   | 139                  | 107   |
| 2. Phoolpur  |         | 2.93             | 2.35          | 54.60 | 61.95              | 148   | 175                  | 117   |
| 3. Soraon    |         | 4.13             | 4.69          | 68.76 | 65.25              | 151   | 162                  | 125   |
| 4. Chayal    |         | 1.97             | 2.13          | 69.12 | 71.07              | 119   | 128                  | 113   |
| 5. Manjhapur |         | 1.46             | 3.33          | 69.45 | 67.96              | 120   | 127                  | 110   |
| 6. Sirathu   |         | 2.74             | 3.49          | 66.05 | 62.03              | 120   | 128                  | 110   |
| 7. Karchhana |         | 1.32             | 1.67          | 66.85 | 61.44              | 125   | 132                  | 122   |
| 8. Meja      |         | 3.36             | 1.24          | 59.63 | 56.51              | 119   | 137                  | 127   |
| District     |         |                  | 2.69          | 2.51  | 64.91              | 62.94 | 127                  | 139   |
|              |         |                  |               |       |                    | 115   | 119                  | 115   |

SOURCE: Statistical Bulletin-Allahabad. Office of the District Economics and Statistics Officer, Allahabad, U.P.

Annexure - II

Area Under Different Crops in the District Allahabad

| Sl. No.  | Tehsil     | Paddy   | Maize | Wheat | Other Cereals | Total Cereals | Urd   | Moong | Gram | Arhar | Other Pulses |      |    |
|----------|------------|---------|-------|-------|---------------|---------------|-------|-------|------|-------|--------------|------|----|
|          |            | 0       | 1     | 2     | 3             | 4             | 5     | 6     | 7    | 8     | 9            | 10   | 11 |
| 1.       | Handia     | 1973-74 | 26.12 | .38   | 22.10         | 22.97         | 71.57 | .06   | .03  | 4.13  | 2.25         | 5.20 |    |
|          |            | 1980-81 | 26.94 | .73   | 38.44         | 17.64         | 83.74 | .13   | 3.79 | 3.42  | 2.54         | 1.36 |    |
| 2.       | Phoolpur   | 1973-74 | 22.72 | .40   | 17.99         | 28.49         | 69.60 | .05   | .02  | 8.30  | 2.91         | 6.21 |    |
|          |            | 1980-81 | 24.13 | .24   | 32.28         | 18.81         | 75.59 | .03   | 3.06 | 5.12  | 2.73         | .92  |    |
| 3.       | Soraon     | 1973-74 | 24.54 | .02   | 27.64         | 17.39         | 69.58 | .14   | .05  | 5.18  | 2.40         | 3.46 |    |
|          |            | 1980-81 | 29.81 | .02   | 35.66         | 15.50         | 81.00 | .09   | 2.25 | 2.46  | 1.82         | 1.52 |    |
| 4.       | Chayal     | 1973-74 | 13.76 | .07   | 14.24         | 32.94         | 61.00 | .02   | .02  | 22.39 | 5.13         | 3.92 |    |
|          |            | 1980-81 | 17.79 | .02   | 21.43         | 27.82         | 67.06 | .06   | .28  | 17.09 | 5.30         | 2.40 |    |
| 5.       | Manjhampur | 1973-74 | 17.64 | .07   | 12.79         | 32.12         | 62.62 | .22   | .01  | 21.72 | 5.79         | 2.49 |    |
|          |            | 1980-81 | 23.71 | .01   | 19.36         | 28.53         | 71.61 | .21   | .49  | 17.28 | 5.70         | .88  |    |
| 6.       | Sirathu    | 1973-74 | 13.82 | .04   | 13.23         | 32.25         | 59.34 | .16   | .05  | 19.68 | 4.75         | 1.66 |    |
|          |            | 1980-81 | 21.34 | .09   | 24.30         | 25.60         | 71.33 | .27   | 1.23 | 15.40 | 4.71         | .80  |    |
| 7.       | Karchhana  | 1973-74 | 20.48 | .01   | 19.09         | 25.99         | 65.56 | .02   | —    | 15.02 | 4.03         | 3.63 |    |
|          |            | 1980-81 | 25.56 | .01   | 19.61         | 19.83         | 65.01 | .04   | .10  | 11.68 | 4.29         | 2.11 |    |
| 8.       | Meja       | 1973-74 | 31.56 | .10   | 20.94         | 24.11         | 76.71 | .05   | .01  | 12.47 | 4.62         | 2.21 |    |
|          |            | 1980-81 | 31.42 | .04   | 30.90         | 14.61         | 76.97 | .03   | .03  | 12.59 | 3.46         | 1.65 |    |
| District |            | 1973-74 | 22.52 | .12   | 19.10         | 26.35         | 68.09 | .08   | .02  | 13.26 | 4.00         | 3.53 |    |
|          |            | 1980-81 | 25.77 | .14   | 29.55         | 20.02         | 75.47 | .10   | 1.27 | 10.66 | 3.72         | 1.58 |    |

| Sl.<br>No. | Tehsils    | Total<br>Pulses    | Total           |                | Lahi/<br>Must-<br>ard | Ground<br>Nut | Sugar-<br>cane | Potato       | Tobacco    | Comm-<br>cial | Other          | G.C.A.           |
|------------|------------|--------------------|-----------------|----------------|-----------------------|---------------|----------------|--------------|------------|---------------|----------------|------------------|
|            |            |                    | Food-<br>grains | 12             | 13                    | 14            | 15             | 16           | 17         | 18            | 19             | 20               |
| 1.         | Handia     | 1973-74<br>1980-81 | 11.66<br>11.25  | 83.23<br>94.99 | .04<br>.05            | -             | 1.45<br>1.03   | 1.19<br>1.68 | -          | 2.68<br>2.76  | 14.09<br>2.25  | 100.00<br>100.00 |
| 2.         | Phoolpur   | 1973-74<br>1980-81 | 17.49<br>11.86  | 87.09<br>87.45 | .07<br>.08            | -             | .53<br>.41     | 2.60<br>2.25 | -          | 3.20<br>2.74  | 9.71<br>9.81   | 100.00<br>100.00 |
| 3.         | Soraon     | 1973-74            | 11.22           | 80.80          | .05                   | -             | .61<br>.28     | 5.55<br>7.10 | -          | 6.21<br>7.47  | 12.99<br>3.39  | 100.00<br>100.00 |
| 4.         | Chayal     | 1973-74<br>1980-81 | 31.53<br>25.12  | 92.54<br>92.19 | .14<br>.21            | -             | .67<br>.01     | .92<br>.43   | .02<br>.82 | 1.75<br>.01   | 5.71<br>1.48   | 100.00<br>6.33   |
| 5.         | Manjhanpur | 1973-74<br>1980-81 | 30.23<br>24.55  | 92.84<br>96.16 | .06<br>.16            | -             | 2.72<br>1.17   | .66<br>.83   | .04<br>.02 | 3.48<br>2.18  | 3.68<br>1.56   | 100.00<br>100.00 |
| 6.         | Sirathu    | 1973-74<br>1980-81 | 26.30<br>22.41  | 85.64<br>93.74 | .12<br>.39            | .07<br>.04    | .76<br>.40     | 1.61<br>1.49 | .06<br>.06 | 2.62<br>2.38  | 11.74<br>3.88  | 100.00<br>100.00 |
| 7.         | Karchhana  | 1973-74<br>1980-81 | 22.70<br>18.21  | 88.27<br>83.22 | .36<br>.24            | -             | .62<br>.30     | .54<br>.66   | -          | 1.52<br>1.21  | 10.21<br>15.57 | 100.00<br>100.00 |
| 8.         | Meja       | 1973-74<br>1980-81 | 19.38<br>18.17  | 96.09<br>95.13 | .32<br>.31            | -             | .38<br>.14     | .43<br>.42   | -          | 1.13<br>0.84  | 2.78<br>4.03   | 100.00<br>100.00 |
|            | District   | 1973-74<br>1980-81 | 20.88<br>17.34  | 88.97<br>92.81 | .18<br>.20            | .01           | .88<br>.46     | 1.52<br>1.74 | .01<br>.01 | 2.60<br>2.41  | 8.43<br>4.78   | 100.00<br>100.00 |

SOURCE : Statistical Bulletin-Allahabad. Office of the District Economics and Statistics Officer, Allahabad, U.P.

Annexure -III

Agricultural Production in Different Tehsils of District Allahabad

During the Year 1973-74 and 1980-81

( M.T. )

| Sl.<br>No. | Tehsils/Years       | Paddy             | Maize          | Wheat            | Other<br>Cereals | Total<br>Cereals | Urd           | Moong           | Gram             | Arahar           |
|------------|---------------------|-------------------|----------------|------------------|------------------|------------------|---------------|-----------------|------------------|------------------|
|            |                     | 0                 | 1              | 2                | 3                | 4                | 5             | 6               | 7                | 8                |
| 1.         | Handia 1973-74      | 15777<br>(13.28)  | 251<br>(34.72) | 15316<br>(14.22) | 16994<br>(10.42) | 44338<br>(12.60) | 26<br>(8.50)  | 6<br>(20.00)    | 1630<br>(3.60)   | 2329<br>(6.43)   |
|            | 1980-81             | 19374<br>(12.31)  | 226<br>(62.26) | 41559<br>(15.31) | 11617<br>(9.29)  | 72776<br>(13.13) | 26<br>(15.95) | 1860<br>(35.31) | 2836<br>(3.77)   | 7445<br>(8.03)   |
| 2.         | Phoolpur 1973-74    | 11912<br>(10.02)  | 232<br>(32.09) | 10795<br>(10.02) | 14237<br>(11.42) | 37176<br>(10.56) | 21<br>(6.86)  | 3<br>(10.00)    | 2773<br>(6.13)   | 2617<br>(7.22)   |
|            | 1980-81             | 17381<br>(11.04)  | 74<br>(20.39)  | 34971<br>(12.88) | 13519<br>(10.81) | 65945<br>(11.89) | 7<br>(4.29)   | 1501<br>(28.49) | 4251<br>(5.66)   | 8010<br>(3.64)   |
| 3.         | Soraon 1973-74      | 15109<br>(12.71)  | 14<br>(1.94)   | 19749<br>(18.33) | 8820<br>(7.08)   | 43692<br>(12.41) | 64<br>(20.92) | 9<br>(30.00)    | 2042<br>(4.52)   | 2538<br>(7.00)   |
|            | 1980-81             | 19929<br>(12.66)  | 7<br>(1.93)    | 35851<br>(13.21) | 9301<br>(7.43)   | 65688<br>(11.74) | 17<br>(10.43) | 1024<br>(19.44) | 1897<br>(2.52)   | 4951<br>(5.34)   |
| 4.         | Chayal 1973-74      | 7857<br>(6.61)    | 17<br>(2.35)   | 9109<br>(8.45)   | 16873<br>(13.53) | 33856<br>(9.62)  | 8<br>(2.61)   | 3<br>(10.00)    | 8245<br>(18.21)  | 5086<br>(14.03)  |
|            | 1980-81             | 11106<br>(7.05)   | 7<br>(1.93)    | 20116<br>(7.41)  | 19205<br>(15.35) | 50434<br>(9.10)  | 11<br>(6.75)  | 120<br>(2.28)   | 12303<br>(16.37) | 13483<br>(14.55) |
| 5.         | Manjhan-pur 1973-74 | 9008<br>(7.58)    | 38<br>(5.26)   | 7597<br>(7.05)   | 74050<br>(53.40) | 90693<br>(25.77) | 82<br>(26.80) | 1<br>(3.33)     | 7269<br>(16.06)  | 5080<br>(14.02)  |
|            | 1980-81             | (13798<br>(8.76)) | 3<br>(0.83)    | 16940<br>(6.24)  | 18210<br>(14.56) | 48959<br>(48.83) | 35<br>(21.47) | 191<br>(3.63)   | 11595<br>(15.43) | 13522<br>(14.59) |

| Sl.<br>No.          | Tehsils/Years | Other           | Total            | Total             | Lahi/         | Ground      | Sugar-           | Potato           | Tobacco        | Other         |
|---------------------|---------------|-----------------|------------------|-------------------|---------------|-------------|------------------|------------------|----------------|---------------|
|                     |               | Pulses          | Pulses           | Food-<br>grains   | Mast-<br>ard  | cane        |                  |                  |                | Crops         |
| 0                   | 1             | 11              | 12               | 13                | 14            | 15          | 16               | 17               | 18             | 19            |
| 1. Handia           | 1973-74       | 2216<br>(18.10) | 6207<br>(6.60)   | 50545<br>(11.33)  | 14<br>(2.48)  | 1<br>(3.85) | 29449<br>(18.94) | 7776<br>(8.98)   | -              | -             |
|                     | 1980-81       | 1017<br>(10.82) | 13184<br>(7.22)  | 85960<br>(11.66)  | 18<br>(2.89)  | -           | 25887<br>(26.32) | 17732<br>(11.54) | 246<br>(11.45) |               |
| 2. Phoolpur         | 1973-74       | 2285<br>(18.66) | 7699<br>(8.18)   | 44875<br>X10.06   | 22<br>(3.89)  | -           | 9290<br>(5.97)   | 14728<br>(17.00) | -              | -             |
|                     | 1980-81       | 686<br>(7.30)   | 14455<br>(7.91)  | 80400<br>(10.91)  | 30<br>(4.82)  | 1<br>(4.35) | 10382<br>(10.56) | 23639<br>(10.56) | *              | 177<br>(8.24) |
| 3. Soraon           | 1973-74       | 1363<br>(11.13) | 6016<br>(6.39)   | 49708<br>(11.14)  | 17<br>(3.00)  | -           | 12709<br>(8.17)  | 36883<br>(42.60) | -              | -             |
|                     | 1980-81       | 1059<br>(11.27) | 8948<br>(4.90)   | 74036<br>(10.04)  | 30<br>(4.82)  | -           | 6582<br>(6.69)   | 68914<br>(44.85) | -              | 117<br>(5.45) |
| 4. Chayal           | 1973-74       | 1342<br>(10.96) | 14684<br>(15.61) | 48540<br>(10.80)  | 48<br>(8.49)  | -           | 12796<br>(8.23)  | 5678<br>(6.56)   | 15<br>(20.00)  | -             |
|                     | 1980-81       | 1560<br>(16.60) | 27477<br>(15.04) | 77911<br>(10.57)  | 68<br>(10.93) | 6           | 9500<br>(9.66)   | 7659<br>(4.98)   | 5<br>(10.87)   | 8<br>(.37)    |
| 5. Manjhana-<br>pur | 1973-74       | 836<br>(6.83)   | 13268<br>(14.10) | 103961<br>(23.31) | 20<br>(3.54)  | -           | 46715<br>(30.05) | 3615<br>(4.18)   | 26<br>(34.67)  | -             |
|                     | 1980-81       | 528<br>(5.62)   | 25871<br>(14.16) | 74830<br>(10.15)  | 47<br>(7.56)  | 2           | 23851<br>(24.25) | 7225<br>(4.70)   | 10<br>(21.74)  | 35<br>(1.63)  |

| Sl. No.      | Tehsils/Years | Other Pulses      | Total Pulses       | Total Food-grains  | Lahi/Mastard    | Ground Nut     | Sugar-cane         | Potato             | Tobacco        | Other Crops      |    |
|--------------|---------------|-------------------|--------------------|--------------------|-----------------|----------------|--------------------|--------------------|----------------|------------------|----|
|              |               |                   |                    |                    |                 |                |                    |                    |                | 1                | 2  |
| 0            |               |                   |                    |                    |                 |                |                    |                    |                | 14               | 15 |
| 6. Sirathu   | 1973-74       | 479<br>(3.91)     | 9274<br>(9.86)     | 33522<br>(7.52)    | 31<br>(5.49)    | 25<br>(96.15)  | 10634<br>(6.84)    | 7197<br>(8.31)     | 29<br>(38.67)  | 13               | 16 |
|              | 1980-81       | 367<br>(3.99)     | 16981<br>(3.30)    | 54760<br>(7.43)    | 88<br>(14.95)   | -<br>(56.52)   | 6175<br>(6.28)     | 9599<br>(6.25)     | 24<br>(452.17) | 6175<br>(1.84)   | 14 |
| 7. Karchhana | 1973-74       | 2206<br>(18.02)   | 18458<br>(19.62)   | 79353<br>(17.79)   | 212<br>(37.52)  | -<br>(13.17)   | 20480<br>(6.63)    | 5743<br>(6.63)     | 1              | -<br>(1.33)      | 15 |
|              | 1980-81       | 2032<br>(21.62)   | 33987<br>(18.61)   | 126363<br>(17.14)  | 130<br>(2.90)   | -<br>(11.06)   | 10881<br>(6.59)    | 10121<br>(13.04)   | 6              | -484<br>(22.53)  | 16 |
| 8. Meja      | 1973-74       | 1478<br>(12.07)   | 18445<br>(19.60)   | 94733<br>(21.24)   | 201<br>(35.58)  | -<br>(8.62)    | 13410<br>(5.74)    | 4966<br>(4.00)     | 3              | -<br>(48.46)     | 17 |
|              | 1980-81       | 1714<br>(18.24)   | 38536<br>(21.10)   | 145082<br>(19.68)  | 204<br>(32.80)  | 1<br>(4.35)    | 5089<br>(5.17)     | 6075<br>(3.95)     | -              | 1041<br>(104.1)  | 18 |
| District     | 1973-74       | 12243<br>(100.00) | 94087<br>(100.00)  | 446052<br>(100.00) | 565<br>(100.00) | 25<br>(100.00) | 155482<br>(100.00) | 86586<br>(100.00)  | 75<br>(100.00) | -<br>(100.00)    | 19 |
|              | 1980-81       | 9397<br>(100.00)  | 182660<br>(100.00) | 737058<br>(100.00) | 622<br>(100.00) | 23<br>(100.00) | 98357<br>(100.00)  | 153645<br>(100.00) | 46<br>(100.00) | 2148<br>(100.00) | 20 |

NOTE : (1) Figures given in parentheses denote percentages to totals.

(2) Other crops include Rendi, Alsi, Sanai and til production.

SOURCE: Statistical Bulletin, - Allahabad. Office of the District Economics and Statistics Officer, Allahabad, U.P.

| Sl. No.  | Tehsils/Years         | Paddy              | Maize            | Wheat             | Other Cereals     | Total Cereals     | Urd               | Moong           | Gram             | Arhar             |                  |    |
|----------|-----------------------|--------------------|------------------|-------------------|-------------------|-------------------|-------------------|-----------------|------------------|-------------------|------------------|----|
|          |                       | 0                  | 1                | 2                 | 3                 | 4                 | 5                 | 6               | 7                | 8                 | 9                | 10 |
| 6.       | Sirathu               | 1973-74            | 5716<br>(4.81)   | 16<br>(2.21)      | 6359<br>(5.90)    | 12157<br>(9.75)   | 24248<br>(6.89)   | 48<br>(15.69)   | 6<br>(20.00)     | 5367<br>(11.86)   | 3374<br>(9.31)   |    |
|          |                       | 1980-81            | 9375<br>(5.95)   | 17<br>(4.68)      | 16046<br>(5.91)   | 12341<br>(9.86)   | 37779<br>(6.81)   | 33<br>(20.25)   | 345<br>(6.55)    | 7802<br>(10.38)   | 8434<br>(9.10)   |    |
| 7.       | Karchha-1973-74<br>na | 20043              | 9<br>(16.87)     | 17940<br>(1.24)   | 22904<br>(16.55)  | 60896<br>(18.37)  | 13<br>(17.30)     | 425<br>(4.25)   | 1<br>(3.33)      | 9457<br>(20.89)   | 6781<br>(18.71)  |    |
|          |                       | 1980-81            | 26305<br>(16.71) | 4<br>(1.10)       | 44889<br>(16.53)  | 21178<br>(16.93)  | 92376<br>(16.66)  | 10<br>(6.13)    | 65<br>(1.23)     | 13871<br>(18.46)  | 18009<br>(19.43) |    |
| 8.       | Meja                  | 1973-74            | 33417<br>(28.12) | 146<br>(20.19)    | 20875<br>(19.38)  | 21850<br>(17.53)  | 76288<br>(21.67)  | 44<br>(14.38)   | 2<br>(6.67)      | 8485<br>(18.74)   | 8436<br>(23.28)  |    |
|          |                       | 1980-81            | 30583<br>(19.43) | 21<br>(5.79)      | 58732<br>(21.63)  | 17210<br>(13.76)  | 106546<br>(19.22) | 11<br>(6.75)    | 19<br>(0.36)     | 18937<br>(25.20)  | 17855<br>(19.26) |    |
| District | 1973-74               | 118838<br>(100.00) | 723<br>(100.0)   | 107740<br>(100.0) | 124664<br>(100.0) | 351965<br>(100.0) | 306<br>(100.0)    | 30<br>(100.0)   | 45258<br>(100.0) | 36240<br>(100.00) |                  |    |
|          | 1980-81               | 157441<br>(100.0)  | 363<br>(100.0)   | 271485<br>(100.0) | 125109<br>(100.0) | 554398<br>(100.0) | 163<br>(100.0)    | 5268<br>(100.0) | 75136<br>(100.0) | 92695<br>(100.00) |                  |    |

Annexure - IV

Area Under H.Y.V. Crops During 1973-74 and 1980

| Sl.<br>No.  | Tehsils    | 1973-74                          |                                  |                                  |                                  |                                  | 1979-80                          |                                  |                                  |                                  |                                  |
|-------------|------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
|             |            | Total<br>area<br>under<br>H.Y.V. |
| 1.          | Handia     | 18172                            | 3426<br>(18.85)                  | 261<br>( - )                     | 15373<br>(82.16)                 | 12631<br>(47.50)                 | 16057<br>(77.72)                 | 18894<br>(41.40)                 | 18394<br>(77.74)                 | 4492<br>(61.95)                  | 4492<br>(61.43)                  |
| 2.          | Phoolpur   | 13720                            | 1827<br>(13.32)                  | 241<br>(2.90)                    | 10862<br>(58.51)                 | 8442<br>(7.14)                   | 10276<br>(94.86)                 | 15887<br>(33.92)                 | 15887<br>(33.92)                 | 5089<br>(61.95)                  | 5089<br>(61.43)                  |
| 3.          | Soraon     | 17403                            | 10183<br>(5.22)                  | 14<br>(4.72)                     | 19600<br>(68.75)                 | 18593<br>(7.14)                  | 28777<br>(61.47)                 | 20134<br>(33.92)                 | 20134<br>(33.92)                 | 12473<br>(24.07)                 | 12473<br>(24.07)                 |
| 4.          | Chayal     | 9050                             | 472<br>(0.67)                    | 48<br>(23.08)                    | 33<br>(11.76)                    | 9366<br>(11.76)                  | 5757<br>(71.14)                  | 6262<br>(30.27)                  | 11647<br>(41.05)                 | 1331<br>(6.64)                   | 1331<br>(6.64)                   |
| 5.          | Manjhanpur | 10375                            | 70<br>(3.96)                     | 39<br>(11.76)                    | 7522<br>(11.76)                  | 5351<br>(79.86)                  | 5430<br>(41.05)                  | 12449<br>(11.56)                 | 9076<br>(14.54)                  | 2996<br>(34.79)                  | 2996<br>(34.79)                  |
| 6.          | Sirathu    | 6584                             | 261<br>(1.68)                    | 17<br>(11.11)                    | 6302<br>(11.11)                  | 5033<br>(28.34)                  | 5296<br>(24.28)                  | 9076<br>(11.56)                  | 9076<br>(11.56)                  | 603<br>(34.79)                   | 603<br>(34.79)                   |
| 7.          | Karchhana  | 23085                            | 387<br>(3.15)                    | 9<br>(1.11)                      | 21513<br>(0.82)                  | 6096<br>(28.34)                  | 6484<br>(24.28)                  | 27096<br>(11.56)                 | 27096<br>(11.56)                 | 9427<br>(57.99)                  | 9427<br>(57.99)                  |
| 8.          | Meja       | 38488                            | 1213<br>(3.15)                   | 122<br>(0.82)                    | 1<br>(0.82)                      | 25537<br>(0.82)                  | 6200<br>(24.28)                  | 7414<br>(11.56)                  | 39413<br>(11.56)                 | 22857<br>(57.99)                 | 22857<br>(57.99)                 |
| Total Urban |            | 298                              | 298<br>(100.00)                  | -<br>( - )                       | 1053<br>( - )                    | 446<br>(42.36)                   | 744<br>(55.07)                   | 633<br>(13.43)                   | 85<br>(59.353)                   | 85<br>(59.353)                   | 85<br>(59.353)                   |
| District    |            | 137175                           | 18137<br>(13.22)                 | 751<br>(7.19)                    | 117128<br>(58.52)                | 68549<br>(34.01)                 | 86740<br>(38.24)                 | 155229<br>(38.24)                | 155229<br>(38.24)                | 155229<br>(38.24)                | 155229<br>(38.24)                |

| Sl.<br>No.  | Tehsils    | 1979-780                         |                                  |                                  |                   | Variations        |                 |         | Total<br>H.Y.V. |
|-------------|------------|----------------------------------|----------------------------------|----------------------------------|-------------------|-------------------|-----------------|---------|-----------------|
|             |            | Total<br>area<br>under<br>H.Y.V. | Total<br>area<br>under<br>H.Y.V. | Total<br>area<br>under<br>H.Y.V. | Paddy<br>H.Y.V.   | Maize<br>H.Y.V.   | Wheat<br>H.Y.V. |         |                 |
| 1.          | Hancia     | 559                              | 278<br>(49.73)                   | 23460<br>(40.95)                 | 16083<br>(56.74)  | 20853<br>(46.24)  | 31.12           | -       | 27.33           |
| 2.          | Phoolpur   | 210                              | 86                               | 21607                            | 12260             | 17435             | 178.54          | 1128.57 | 45.23           |
| 3.          | Soraon     | 21                               | 13<br>(61.90)                    | 23155<br>(89.47)                 | 17723<br>(76.54)  | 30209<br>(69.75)  | 22.49           | 1200.00 | -4.68           |
| 4.          | Chayal     | 19                               | 17<br>(89.47)                    | 11880<br>(63.86)                 | 7586<br>(37.94)   | 8934<br>(37.94)   | 181.99          | -48.48  | 31.77           |
| 5.          | Manjhanpur | 3                                | 02<br>(66.67)                    | 9876<br>(65.62)                  | 6481<br>(42.45)   | 9479<br>(42.45)   | 4180.00         | -77.78  | 21.12           |
| 6.          | Sirathu    | 27                               | 20<br>(74.07)                    | 8653                             | 5174<br>(59.79)   | 5797<br>(32.65)   | 131.03          | 900.00  | 2.80            |
| 7.          | Karchhana  | 9                                | 08<br>(88.89)                    | 26628                            | 15068<br>(56.59)  | 24503<br>(45.60)  | 2335.92         | 700.00  | 147.18          |
| 8.          | Meja       | 85                               | 77<br>(90.59)                    | 35082                            | 24215<br>(69.02)  | 47149<br>(63.22)  | 1784.34         | 7600.00 | 290.56          |
| Total Urban |            | 25                               | 25<br>(100.00)                   | 1231<br>(100.00)                 | 207<br>(16.82)    | 317<br>(16.78)    | -71.48          | -       | -53.59          |
| District    |            | 958                              | 526<br>(54.91)                   | 161572<br>(64.86)                | 104797<br>(51.82) | 164676<br>(51.82) | 227.25          | 874.07  | 52.88           |
|             |            |                                  |                                  |                                  |                   |                   |                 |         | 89.85           |

NOTE : Figures given in parentheses denote percentages to totals.

SOURCE : Statistical Bulletin-Allahabad. Office of the District Economics and Statistics Officer, Allahabad, U.P.